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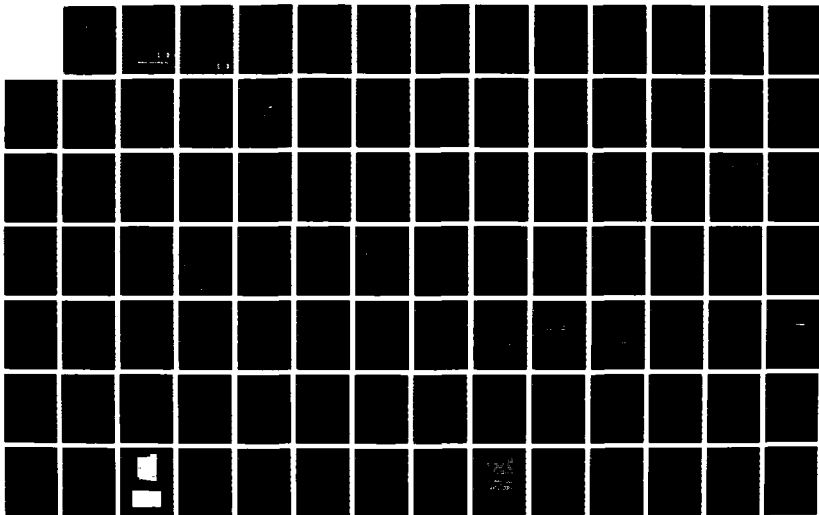
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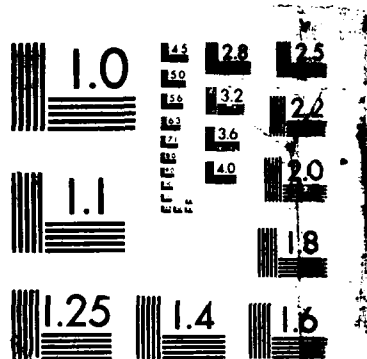
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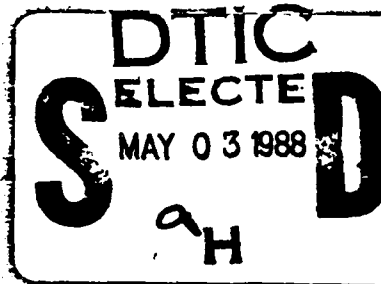
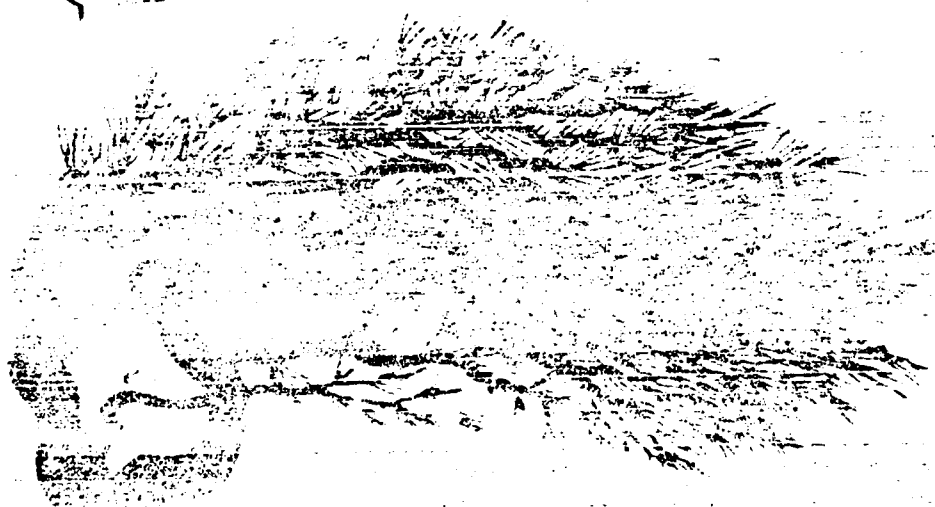
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REPORT OF CLASS III SURVEY AND TESTING
OF CULTURAL RESOURCES
AT CUCHILLO, NEW MEXICO



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REPORT OF CLASS III SURVEY AND TESTING
OF CULTURAL RESOURCES
AT CUCHILLO, NEW MEXICO

Prepared for
U.S. Army Corps of Engineers
Albuquerque District,
New Mexico
Contract #DACW47-85-D-0030
Work Order #DM0006

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January 1987

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ABSTRACT

→ In October of 1985, the Army Corps of Engineers, Albuquerque District, contracted Mariah Associates, Inc. to conduct a cultural resource survey and assessment of approximately 1050 acres and 3.2 miles of access road in the Cuchillo Negro drainage northwest of Truth or Consequences, New Mexico, the site of a proposed dam and floodpool. A total of 20 archaeological sites was located; six of these were subsequently tested. Sites included Archaic scatters, Mogollon structural sites, and recent historical sites. Seventy-two isolated artifacts were recorded. Ancillary studies included paleontological survey and ethnographic interviews. → N^o pg →

Site-specific recommendations concerning eligibility to the National Register of Historic Places are made and recommendations for future work in the project area are advanced.

MANAGEMENT SUMMARY

Results of a Class III cultural and paleontological assessment of lands lying within the area of potential impact of a proposed ACOE project at Cuchillo, New Mexico, are reported.

Twenty sites were recorded and informant evidence indicating the presence of as many as 10 additional sites was discovered. Eight sites are considered definitely eligible and 11 sites are considered potentially eligible for nomination to the National Register of Historic Places. For these 19 sites, present and potential impacts are characterized. A preliminary assessment of, and priorities for, the research potential for each site is offered; data recovery and further testing strategies are suggested.

The manager should note that certain of these sites were found to retain substantial scientific value; among these are numbered 5 - 15 discrete elements of one or more concurrently or sequentially occupied, dispersed, frontier Mogollon communities. Especially valuable and most clearly subject to impact are one or more Mogollon central place settlements whose value and uniqueness imply total avoidance or extensive data recovery as the only appropriate mitigative options available to the manager.



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In a seldom published area such as Cuchillo, the researcher must rely heavily on the generosity of the people best informed about the area. We wish to acknowledge those who helped us for the wealth of information they shared, and for the enthusiasm with which they advised, informed, and supported our efforts.

Nalda Mitchell served us coffee and chili on cold days and taught us much about the natural history of the valley; her deep local knowledge proved invaluable. She knew the location of many archaeological sites in the valley, including some which had become almost invisible with time. In spite of his busy schedule, Karl Laumbach freely provided us with relevant literature otherwise unavailable and offered his considerable insights into the archaeology of the region. It was a pleasure to have Steve Lekson visit us during the testing phase. His work in Sierra County proved to be a central resource. Cyé Gossett generously offered her valuable observations, approaches, and interpretations of lithic site significance. Our crew members gave freely of their commitment, expertise, efficiency, and good nature. The people of Cuchillo were warm and friendly. It was good to be among them.

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1.0 INTRODUCTION

This report is submitted in fulfillment of Delivery Order No. DM0006 under Contract No. DACW47-85-D-0030 awarded to Mariah Associates, Inc., by the Albuquerque District of the U.S. Army Corps of Engineers. The report describes archaeological studies carried out in the course of a Class III inventory survey of a proposed project area near Cuchillo, New Mexico (Figure 1.1).

The work was directed by John C. Acklen, who served as Principal Investigator and Field Director. Archaeological field work began in October and was concluded in December, 1985. Historical field work was conducted in January, 1986.

Ceramic analyses and reporting were carried out by Amy C. Earls. Lithic analyses are the work of David McGuire with Jack B. Bertram. Earls also conducted and wrote the bulk of the historical studies. Karen Kramer wrote preliminary site descriptions. Acklen assumed overall responsibility for coordinating report production and for the bulk of Sections 4, 5, 6, and 7, while Bertram wrote most of Sections 2, 3, and 9. Bertram and Acklen wrote Section 10. Acklen, Bertram and Earls edited and compiled the entire report. Stephanie Phillips served as technical editor. Peggy Brukett typed the manuscript and final assembly was done by Joann Oliver.

This report is organized in an order mirroring the actual schedule of research: Section 2 presents the environmental context of research; Section 3 details the intellectual and scientific context; Sections 4 and 5 detail the Class III survey carried out; Section 6 discusses the limited testing accomplished; Sections 7 and 8 discuss informant-based and archive-based data, while Sections 9 and 10 detail results, conclusions, and recommendations.

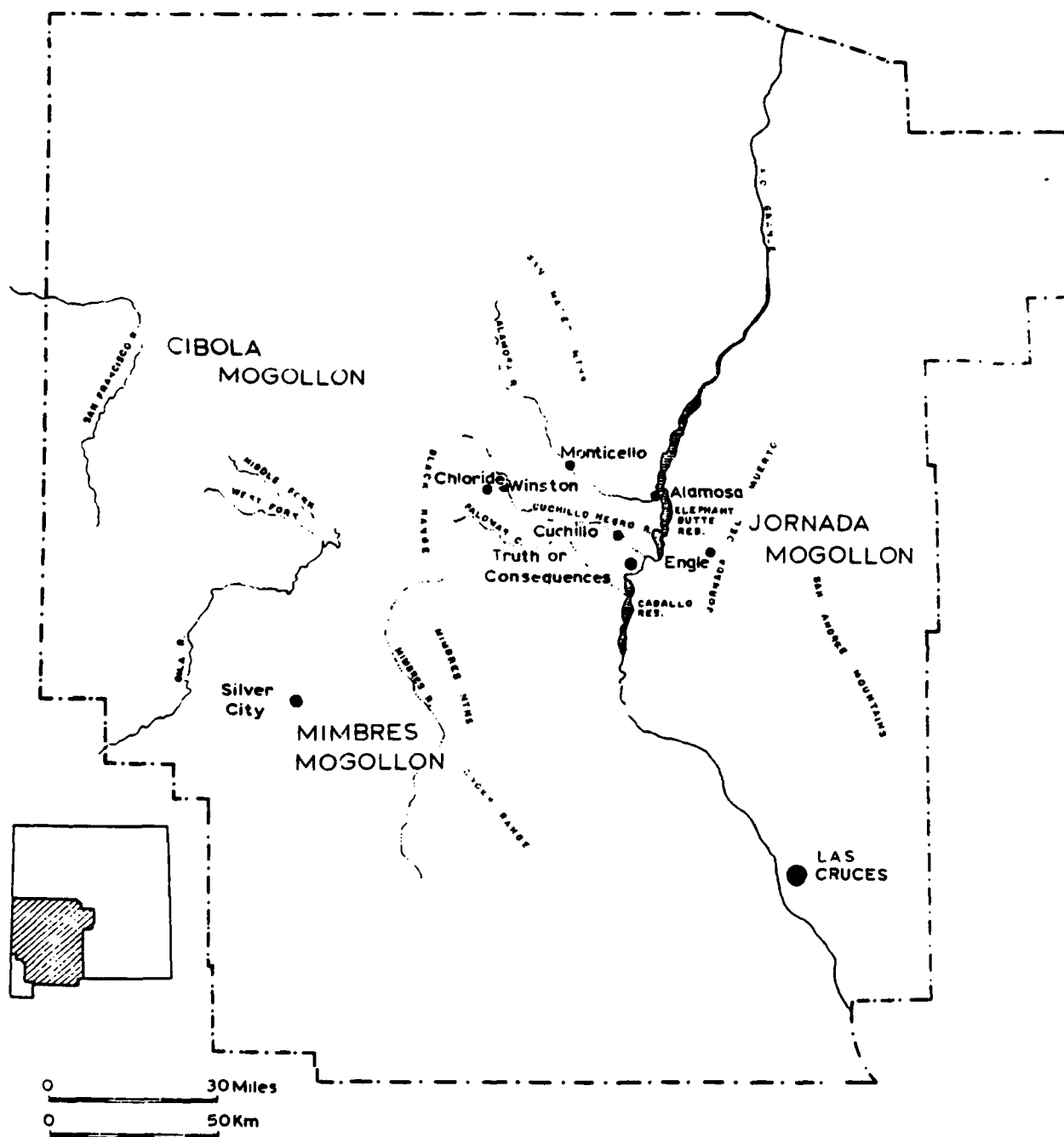


Figure 1.1 Southwestern New Mexico, Cuchillo Assessment Study, ACOE, 1986

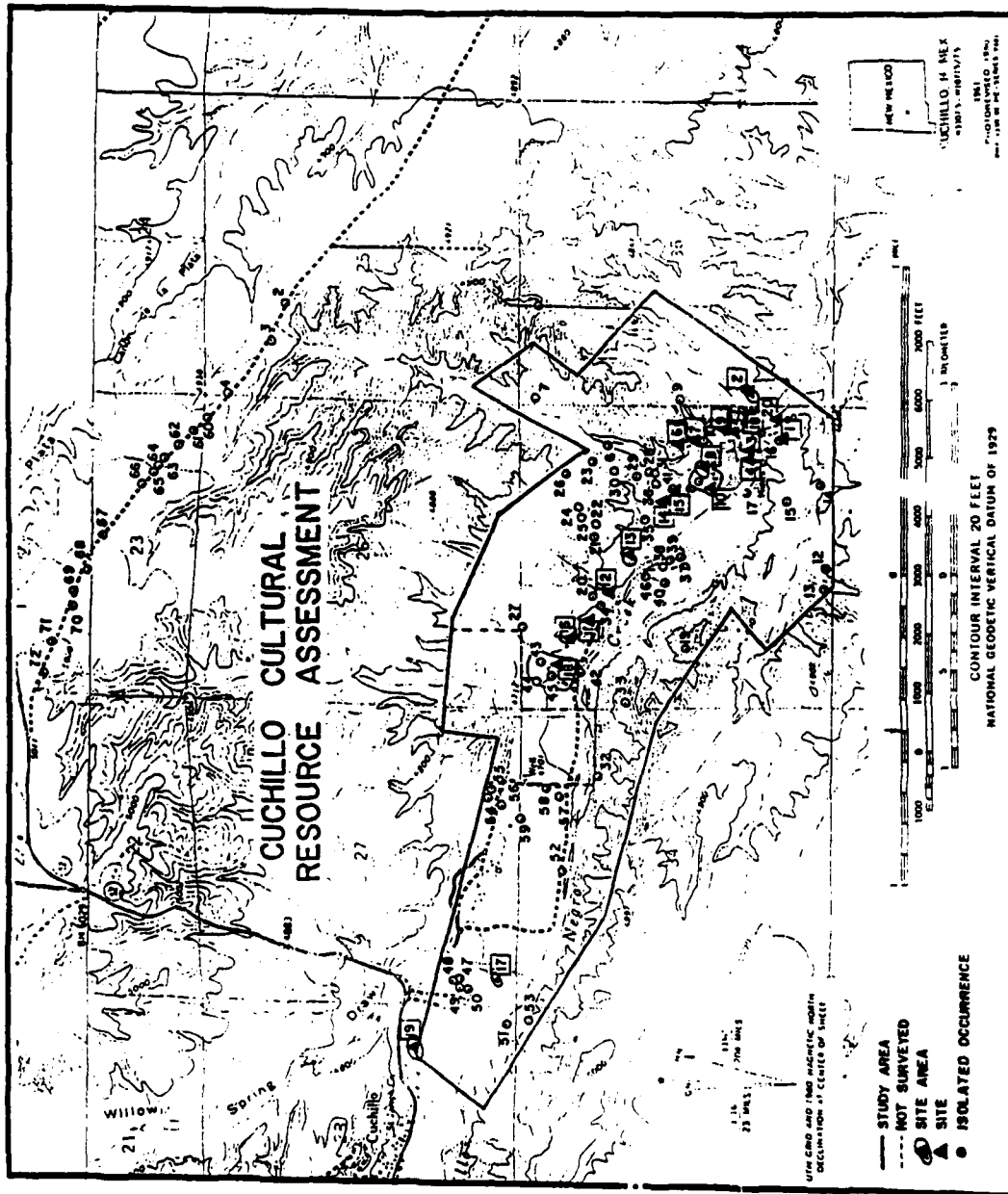


Figure 1.2 Study Area, Cuchillo Assessment Study, ACOE, 1986 1/

1/ Field Numbers in boxes. For LA Numbers see Table 1.1

Table 1.1 Concordance of Mariah Site Field Numbers and Laboratory of Anthropology Site Numbers, to Accompany Figure 1.1, Cuchillo Assessment Study, ACOE, 1986

Mariah Field Number (Boxed on Map)	Laboratory of Anthropology Number
1	LA 53479
2	LA 50548
3	LA 53480
4	LA 53481
5	LA 53482
6	LA 53483
7	LA 50549
8	LA 50550
9	LA 50547
10	LA 53484
11	LA 52485
12	LA 53486
13	LA 53487
14	LA 53488
15	LA 53489
16	LA 53490
17	LA 53491
18	LA 53492
19	LA 53493
20	LA 53494

2.0 ENVIRONMENTAL CONTEXT

The study area lies in south-central New Mexico, along Cuchillo Negro Creek; it extends two miles downstream from the town of Cuchillo and into the canyon narrows locally known as the Cuchillo Box, which in turn lies seven miles upstream from the confluence of the Cuchillo Negro and the Rio Grande at Truth or Consequences. The study area is contained entirely within T12S, R5W: sections 22, 23, 25-28, and 33-36, Sierra County, New Mexico, and includes those areas expected to be directly impacted by access road construction, dam construction, and/or inundation.

Geologically, the area is typical of the Basin and Range Province. Tertiary block and thrust faulting produced numerous ranges of low relief by exposing late Paleozoic and occasional late Mesozoic units interspersed with basins which were filled during the late Tertiary and Quaternary by outwash alluvium from adjacent ranges. Locally, this geology is expressed along Cuchillo Negro Creek as an exposed resistant Pennsylvanian/Permian series along the south side of the canyon and in the Cuchillo Box, overlain disconformably north of the creek in the uplands by the Pliocene, Pleistocene, and Recent cobble, gravel, conglomerate, and sand units of the Santa Fe Formation. The plain in the higher portion of the study area is cut by numerous unnamed laterals, Willow Spring Draw, and Cuchillo Negro Canyon, which probably follows a local block fault striking east-southeast through the study area. As a result, the southern portion of the study area is characterized by steep bluffs, while the terrain of the northern portion lacks relief but grades into relatively deep lateral north-south arroyos incised into the alluvial deposits of a series of at least three outwash terrace benches as one moves south into the Cuchillo bottoms. The bottoms soils are rich, deep alluvium deposited by the creek, bounded laterally by arroyo outwash fans and terraces to the north and by steep alluvial/colluvial cobble fans to the south. The depth of the bottoms alluvial deposits is probably due to the grade control exerted by the Cuchillo Box, a deep, steep-sided water gap entrenched into an upthrust Pennsylvanian-Permian block composed mainly of thinly-bedded limestones and limey sandstones.

Undisrupted contacts of the Santa Fe and late alluviums with impermeable elements of the underlying Late Paleozoic units are probably responsible for the springs reported by an informant to be present near the head of the Cuchillo Box (SE 1/4 of SE 1/4, Section 35) and along the southern bluffs of Cuchillo Negro Canyon (SW 1/4 of NW 1/4, Section 35). Aside from these and other undetected springs, local surface water sources are seasonal; the Cuchillo Negro flows only during spring snow melt and after summer thunderstorms. It is likely, however, that water has always been available near the surface just upstream from the Cuchillo Box.

Climate in the area is typical of the Upper Sonoran Zone, in that summers are hot and punctuated only by occasional thunderstorms while winters are relatively mild. No local data are available, but the Cuchillo valley probably suffers from valley flow during the winter, so that the valley bottoms enjoy significantly fewer frost-free days than do the upper benches and flats to the north. The growing season probably extends, on average,

through roughly 200 days, based on extrapolation from data taken at Elephant Butte (Tuan et al. 1973); the same data base would lead us to expect a local average rainfall of perhaps 12 inches per year.

Floral communities in the study area are strongly controlled by slope, aspect, and available water. The flats to the north are dominated by mixed creosote (Larrea tridentata) and mesquite (Prosopis juliflora), with a variety of grasses also present, including several gramas (Bouteloua spp.). The dissected north valley slopes mostly support a range of bush forms, including mesquite, creosote, snakeweed (Gutierrezia sarothrae), yucca (Yucca spp.), Mormon tea (Ephedra sp.), saltbush (Atriplex canescens), and occasional isolated stands of hackberry (Celtis reticulata). The bases of alluvial/colluvial fan units tend to be dominated by mesquite; they are often almost impenetrable.

Valley bottom associations are dominated by burro-brush (Hymenoclea monogyna), which appears to have almost completely excluded salt-cedar (Tamarix sp.). Also present are willows (Salix sp.), cottonwoods (Populus sp.), oak (Quercus sp.), buckwheat (Eriogonum sp.), and possibly walnut (Juglans sp.).

Various cacti occur sporadically at all elevations. Grasses are sparse, but include a range of gramas, muhlies (Muhlenbergii spp.), sacatons and dropseeds (Sporobolus spp.), and threeawns (Aristida spp.). Local cultivation seems to have been primarily for garden crops, hay, and grain sorghums; the entire valley bottom has recently been under cultivation (see Section 7.1).

Domestic fauna observed during survey included numerous cattle (Bos taurus), horses (Equus caballus), and dogs (Canis familiaris). Feral forms included honeybee (Apis mellivora); a large hive was observed in a cave within the Cuchillo Box. Wild forms seen included deer (Odocoileus hemionus), golden eagle (Aquila chrysaetos), various buteos (Buteo spp.), marsh hawk (Circus cyaneus), sandhill crane (Grus canadensis), jackrabbit (Lepus californicus), cottontail (Sylvilagus spp?), burrowing owl (Athaene cunicularia), mourning dove (Zenaida macroura), scaled quail (Callipepla squamata), diamondback rattlesnake (Crotalus atrox), and various lizards (Sceloporus, Uta, Urosaurus). Animals recognized from scat, tracks, or nests included spotted skunk (Spilogale putorius), coyote (Canis latrans), fox (Urocyon?), woodrats (Neotoma spp.), and bobcat (Felis (Lynx) rufus). Pronghorn (Antilocapra americana) are common in the Black Range and plains in the area; they were extirpated early in this century and subsequently reintroduced by the state. Both puma (Felis concolor) and wapiti (Cervus elaphus canadensis) are regular winter visitors.

3.0 OVERVIEW AND RESEARCH DESIGN

3.1 PREHISTORIC AND PROTOHISTORIC OVERVIEW

The Cuchillo study area lies in that portion of northern Sierra County characterized by an "abysmal lack of descriptive and interpretive archaeological data" (Winter, in Enloe et al. 1981:1) at the time of the last local archaeological reconnaissance. Previous work was performed in the 1930's when Herbert Yeo of the New Mexico Department of Highways recorded various sites near Truth or Consequences. No further work is recorded until the 1970's, when the Laboratory of Anthropology assigned new numbers to Yeo's site records; the Bureau of Land Management (BLM) and New Mexico State University also worked in the area in the 1970's. Since that time, Stuart and Gauthier's (1981:206) wise recommendation, that initial study of the area should receive highest priority, has resulted in two major reconnaissance studies of the southern Rio Grande and its lower tributaries (Marshall and Walt 1984; Lekson 1984), a 2% sample survey of state lands in western Sierra County (Laumbach and Kirkpatrick 1983), and an extensive survey/excavation project (Nelson 1984) covering the Palomas drainage just to the south of the Cuchillo Negro drainage. Lekson's (1984) and Laumbach and Kirkpatrick's (1983) studies both provide excellent, thoughtful overviews of current knowledge and problems in the area. Unfortunately, Laumbach and Kirkpatrick (1983) is difficult to obtain and both Lekson (1984) and Mills (1985) are in press, making the most recent literature on the area difficult to access.

3.1.1 Major Prehistoric Research Problems

The Paleo-Indian period in western Sierra County is currently represented only by contextually odd or isolated point finds: Clovis (Harkey 1981), Folsom (Laumbach and Kirkpatrick 1983), Belen/Plainview (Baker and Campbell 1960; Laumbach and Kirkpatrick 1983), and Milnesand/Agate Basin (Baker and Campbell 1960).

Archaic materials are represented by both isolates and a few sites (Gossett, personal communication; Laumbach and Kirkpatrick 1983). Early and Middle Archaic sites and isolates seem to be in upland/grassland settings (Laumbach and Kirkpatrick 1983:133); Late Archaic materials which are substantially indistinguishable from Early Ceramic types occur mainly in lower elevations and on benches, often in association with later materials (Laumbach and Kirkpatrick 1983:81; Lekson 1984:71, Gossett, personal communication).

Sites of the Early Pithouse period are known, including "fortified" sites (Lekson, 1984:92-102) and other ridgetop sites, both in the lowlands and uplands (Laumbach and Kirkpatrick, 1983:133-134). Correlations of the Piro Pueblo, Mimbres Valley, and Jornada Mogollon cultural sequences are presented in Table 3.1. It is likely that many more Early Pithouse sites are present in the areas surveyed. These would be obscured by later settlements since they are typologically datable only by the presence of plain red and brownwares and the absence of other ceramic types. Since

Table 3.1 Piro Pueblo/Mimbres Valley, and Jornada Mogollon Sequences, Cuchillo Assessment Study, ACOE, 1986

	PIRO PUEBLO PHASE	MIMBRES VALLEY PHASE	JORNADA MOGOLLON PHASE
AD 1600 -	<u>COLONIAL PIRO</u> Large masonry or adobe pueblos Late Rio Grande glazes, graywares		
AD 1400 -	<u>ANCESTRAL PIRO</u> Large masonry or adobe pueblos Early Rio Grande glazes, graywares	<u>CLIFF</u> Adobe pueblos Gila Polychrome, Tonto Polychrome, brownwares	<u>LATE EL PASO</u> Adobe pueblos Late El Paso Polychrome, Gila and Tonto Polychrome
AD 1200 -	<u>LATE ELMENDORF</u> Large masonry pueblos Elmendorf B/W, White Mt. redwares, brownwares	<u>BLACK MOUNTAIN</u> Adobe pueblos Playas Red, El Paso Polychrome, Chupadero B/W, brownwares	<u>EARLY EL PASO</u> Adobe pueblos El Paso Poly., Mimbres B/W, Chupadero B/W, White Mt. Redwares (?)
AD 1000 -	<u>EARLY ELMENDORF</u> Masonry-based jacal structures and pitstructures Elmendorf B/W, brownwares	<u>CLASSIC MIMBRES</u> Cobble masonry pueblos Classic Mimbres B/W brownwares	<u>DONA ANA</u> Pitstructures, adobe surface structures El Paso Poly., Jornada, Brownwares, Mimbres B/W, Chupadero B/W, White Mt. redwares
AD 800 -	<u>TAJO</u> Small cobble-based jacal surface structures and pitstructures Red Mesa B/W, brownwares	<u>THREE CIRCLE</u> Rectangular pitstructures Boldface B/W brownwares	<u>MESILLA (LATE PITHOUSE)</u> Pitstructures Jornada and late El Paso El Paso brownwares, Boldface B/W
AD 600 -	<u>San Marcial</u> Pitstructures and basalt-clast-based jacal surface rooms	<u>SAN FRANCISCO</u> Rectangular pitstructures Mogollon R/B, brownwares	
AD 400 -		<u>GEORGETOWN</u> Circular, D-shaped pitstructures San Francisco Red, Brownwares	<u>EARLY PITHOUSE</u> Pitstructures Early El Paso Brownwares, San Francisco Red
AD 200 -		<u>CUMBRE</u> Circular, oval pitstructures red-slipped wares, brownware	
AD 1 -			
200 BC -			

plain red and brownwares dominate most later assemblages as well, severely surface-collected later sites will tend conversely to appear as "ceramically Early Pithouse". As Laumbach and Kirkpatrick (1983:134) discovered,

"Late [and early] pithouse sites are...apt to be built on the same terrace that the Mimbres pueblos were built on. As a result many late pithouse sites may be obscured by either the later construction or the alluvial development of the terraces.

It now appears that the pithouse period development in the Black Range and on the Rio Grande was contemporary and varied little from that found in the Mimbres, Gila, or San Francisco drainages. It would also appear that the "cultural" or at least the ceramic boundary which later separates the Mimbres Branch from the Jornada Branch of the Mogollon was established at an early date."

Laumbach and Kirkpatrick place the Mimbres Mogollon/Jornada Mogollon boundary well to the east of the Cuchillo study area. Classic Mimbres sites may be expected "almost anywhere that alluvium has resulted in the development of farmable soils" (1983:134), although larger sites tend to be located near springs or stream confluences.

These sites are characterized by Mimbres Classic B/W, Corrugated brownware, Alma Plain, and some El Paso brownware. Redware and Indented/Corrugated brownware are minor types. In general, tradewares other than El Paso are absent (Laumbach and Kirkpatrick, 1983:134).

Small farmsteads may contain only a single surface or semisurface room; in larger communities, these may be clustered around a possible great Kiva or "Great Hole-in-the-Ground," as at Lekson's (1984:104-119) Site 119 (LA 50548), which was relocated during the present survey. Isolated Great Holes-in-the-ground seem to form a geographic focus for dispersed site distributions on the upper Palomas and upper Alamosa drainages, as well as in the Cuchillo Negro (Lekson 1984:116). In still larger communities, the great kiva is replaced by a plaza associated with large or small-room roomblocks, some of which occur as "unit pueblos" (Lekson 1984:116). In larger sites, roomblocks tend to be constructed of cobble masonry over an upright slab base (Lekson 1984:87-89). Following the Classic Mimbres "collapse," the Cuchillo study area becomes a literal stylistic frontier between El Paso Phase Jornada Mogollon settlement to the south and east, and Tularosa Phase Cibola Mogollon settlement to the north and west (Laumbach and Kirkpatrick, 1983:135-139). Of all the sites from this period (A.D. 1150-1275) found in the well-reported Sierra County surveys, only one (Site 68 of Lekson, 1984:125) appears to be ceramically or architecturally intermediate between the Mimbres and El Paso Phases. Almost all others are rather easily classifiable as either Tularosa or El Paso/Black Mountain/Animas. The few exceptions lie on Palomas Creek and have a ceramic assemblage dominated by a carbon-painted B/W ware resembling Magdalena

B/W, which Lekson (1984:67) has humorously referred to as "Truth-or-Consequences B/W." Associated architecture seems to be very large block pueblos with plazas, reminiscent of the late Mariana Mesa and Magdalena area sites to the north and northwest.

Within western Sierra County, evidence of Apache occupation seems to be limited to a few structures which may pertain to that period (Lekson 1984:263-264) and occasional knapped glass and metal arrowheads (Laumbach and Kirkpatrick 1983:139). Lekson (1984) has provided an extensive ethnohistoric reconstruction, which could serve as a basis for modeled expectations in future survey.

Several major research problems are implied by the recently expanded data base summarized above; these relate mainly to regional interaction, subsistence strategy, chronology, and site location strategy.

Chronology for the entire prehistoric sequence seems less than solidly founded, as absolute dates are rare. Ceramic relative dates rely so strongly on rarer elements and on assemblage composition that intensively collected sites, early sites, or sparse sites are essentially undatable. The same is true for preceramic and aceramic sites. A chronology based on architecture is probably premature, at least at the survey level. The need for systematic dating by radiocarbon, archaeomagnetic, and dendrochronological analyses is clear; moreover, the domination of assemblages by temporally undiagnostic brownwares strongly suggests that substantial effort should be devoted to the exploration of local ceramic dating by thermoluminescence or other means. Lithic assemblage dating by obsidian hydration may not prove to be locally worthwhile as the rare obsidian tools appear to come from a wide variety of cobble, outcrop, traded, and "Apache tear" sources (P. Shelly, personal communication, 1985).

Lekson (1984) has presented a model for the Mogollon cultural sequence which views Mogollon subsistence prior to the Mimbres Classic as basically hunter-gatherer in orientation; this suggestion has multiple implications for regional interaction, site visibility, and site location strategy which should be tested. The post-Mimbres phenomena in the region are complex;

Lekson's skepticism of the obvious El Paso Jornada/Tularosa Cibola expansion model is well taken, yet the Laumbach and Kirkpatrick stylistic frontier seems real. Must we explain differences between Tularosa and El Paso by reference to ethnicity? What environmental changes in the Cuchillo area could account for the frontier observed? And what is the significance of the "Truth-or-Consequences B/W" (Lekson 1984:67) sites?

3.2 HISTORIC OVERVIEW

Although Cuchillo Negro was named for an Apache chief killed in 1857, the relationship between the Cuchillo Negro and Chief Cuchillo Negro remains undocumented. Wilson (1985) notes that the founding date and conditions of early settlement at Cuchillo are less certain than for other communities in Sierra County. An 1869 report suggests that the Cuchillo valley was being cultivated by people who lived in Alamocita, now known as Monticello. Wilson (1985:55-56) suggests that the town was founded in 1871

or 1872 and may have supplied agricultural products to Alamosa, which distributed food to the Southern Apaches and was expected to be the site of a reservation.

Early inhabitants of Cuchillo must have lived in constant fear of Apache raids. According to one newspaper account, settlers fearing attack temporarily left Cuchillo in 1872. In the fall and winter of 1879, Chief Victorio's Apaches ravaged the valley and subsequently endured several skirmishes with Army troops. In April of 1880, Colonel Edward Hatch pursued Victorio from temporary headquarters in Cuchillo. Apache raids ended by 1885 (Wilson 1985:58-59).

At the time of its first census in 1880, Cuchillo had a population of 233 people living in 51 houses. All but three community members were native New Mexican Hispanics. Subsistence was probably heavily dependent upon agriculture, although ranching and wage work played a role. Ranching was apparently confined, for the most part, to four families who owned 3000 to 4000 sheep (Wilson 1985:56).

By 1885, the population of Cuchillo had grown to 296 people including six Anglos. Agriculture remained the primary basis for subsistence. Most farmers cultivated between six and 18 acres in corn, wheat, barley, and beans. Sheep ranching apparently declined in importance and cattle ranching made its first appearance. By 1885, one of the Anglo residents, Ed Fest, had opened a mercantile and by 1888, he owned the Butterfield stage line as well. The stage line connected the railroad siding at Engle, New Mexico, with the silver mining towns in the Black Range (Wilson 1985:57). By the early 1900s, the stage line fell into disuse.

By 1900, the population had declined to 180 people, but a decade later it had increased to 275 people. It is interesting to note that unemployment was not uncommon so early in the century. Wilson (1985:59) reports that the decline in the subsistence economy may be due in part to severe floods in 1904-1905 and again in the 1920s. Angora goat herding may have supplemented agriculture as a primary subsistence pursuit in the early 1900s; it persisted in the valley until the early 1940s.

After World War I, the decline of mining and freighting followed by repeated flooding eclipsed Cuchillo's limited days of prosperity (Wilson 1985:59). Informant data suggest that the population may have rebounded during the Great Depression. Given the lack of wage work, farming in the valley provided a means to subsist. As late as 1940, 353 acres were still being irrigated by the Cuchillo ditch. Today, however, only two small plots are cultivated.

3.2.1 Major Historic Research Questions

The brief historic overview suggests several potentially interesting avenues of research. Would it be possible to document interaction of early settlers with Apaches archivally or archaeologically? A primary interest in historic sites is their potential as documents of above-mentioned subsistence trends. Can sites relating to earliest Cuchillo be isolated? To what degree were the earliest inhabitants linked with a cash economy as

reflected in material remains? Is the stage line visible archaeologically? What was the effect of flooding on recognized historic remains and what are the implications of long-term flooding for the recognition of prehistoric sites in the valley floor?

3.3. PROJECT SPECIFIC GOALS

Most of the broad research questions suggested by the prehistoric and historic overviews are beyond the scope of this project. The overviews are important, however, in establishing parameters of significance for cultural resources. The primary concern of the present project was to obtain management data to be used by the Army Corps of Engineers in the evaluation of planning alternatives, preparation of National Environmental Protection Act (NEPA) documents, and the development of a cultural resources management plan for the Cuchillo project area. Specific goals included the following:

1. The location and description of all cultural and paleontological remains visible on the surface within the project area;
2. The test excavation of selected resources to assess the character and extent of cultural deposits;
3. The documentation of the Cuchillo cemetery and community concerns relating to potential project impact;
4. Identification of those cultural resources eligible for inclusion on the National Register of Historic Places (NRHP), assessment of project impact on cultural resources, and development of data recovery estimates.

4.0 SURVEY DESCRIPTION

The purpose of field observational and analytical techniques adopted during the survey phase of this project was to locate, identify and describe all cultural and paleontological resources in the project area which can reasonably be detected from the surface. To this end, a comprehensive pedestrian survey was conducted over the entire project area. Ancillary studies including auger testing, test excavation, and interviews with local informants were used to augment management data collected during the survey phase. These studies are discussed in later sections of the report.

4.1 SURVEY COVERAGE

Prior to the initiation of survey, BLM site files were consulted to determine if sites in the project area had been previously recorded. None were found. It was known, however, that in the previous year, Steve Lekson and John Stein recorded four sites in the project area including LA 50547, 50548, 50549, and 50550. Forms and maps for these sites are adapted from their work. After completion of the records check, a Class III pedestrian survey was conducted of the entire project area which encompassed roughly 1050 acres and 3.2 miles of proposed access road right-of-way. The right-of-way corridor was 150 ft wide. The purpose of the survey was to ascertain the number, density, types, and precise location of cultural resources within the project area. The crew consisted of four surveyors including a supervisory archaeologist, a lithic technologist, a ceramicist, and a technician. To facilitate precise location of cultural resources encountered, project area boundary corners and section corners were located and flagged prior to the initiation of comprehensive survey. As specified in the scope of work, distance between surveyors did not exceed 20 meters. During each transect, the outside crew member set out a line of flagging which was followed in the return pass. This procedure insured uniform areal coverage. Throughout the survey, visibility was a problem. Cultural features were easy to distinguish on terraces but individual artifacts were sometimes difficult to see among multicolored gravels, some of which were silicious. Visibility on the alluvial flats was obscured by dense stands of burro brush and mesquite.

4.2 DEFINITIONS OF SITES AND ISOLATED OCCURRENCES

When an artifact or feature was located, transects were abandoned and surveyors searched for additional cultural materials. Generally, if less than three artifacts were encountered in association, materials were recorded as isolates. Three or more artifacts were generally recorded as sites. Exceptions involved rockshelters and recent trash dumps. Rockshelters with any evidence of potential prehistoric deposition (i.e., soil fill, possible smoked ceilings, or ash on floors) were recorded as sites in the absence of any prehistoric cultural material. Trash dumps post-dating World War II were recorded as isolates irregardless of the number of items in association.

4.3 RECORDATION

4.3.1 Recordation of Isolated Artifacts

Isolates were accurately plotted on U.S.G.S and orthophotographic maps. Attributes recorded for isolated artifacts included the frequencies and types of artifacts, the number and kinds of features, and environmental situation.

4.3.2 Recordation of Archaeological Sites

When an archaeological site was encountered, crew members converged and marked various artifact and feature types with color coded pin flags. Datum was established and marked with an 18 inch, metal-tagged rebar impressed with Mariah project and field number (e.g., MA 235F-1 through MA 235F-20). The rebar was driven into the ground with only the rebar top and metal tag left exposed on the surface. Datum served as a method of permanently identifying the resource by number and as a mapping station.

Once datum and the areal extent of site surface were established, various tasks were pursued concurrently. General environmental data, a description of horizontal site boundaries, site age, a description of the frequency and types of surface features, the nature of artifact assemblages, and depositional integrity were recorded on Laboratory of Anthropology Archaeological Site Survey forms. A primary concern during the recording was the evaluation of chronometric potential and the integrity and depth of archaeological deposits. To this end, some diagnostics were provenienced and collected. Runoff gullies and other disturbances were routinely and thoroughly examined for evidence of exposed features with chronometric potential, for cultural deposition, and for evidence of artifact transport. In some instances, when the depth of deposits was in doubt, sites were augered as a part of the survey procedure. The auger's bucket is 6 inches in diameter. Other sites were targeted during the survey phase for subsequent test excavation. All sites were photographed in color and in black and white as a routine aspect of survey recording.

A planview map was produced for each site to depict the relation of the site to nearby physiographic features, the location of cultural features, the extent of scatter, datum location, and the location of sampling units. Locations of collected diagnostics and auger tests were also plotted on planview maps.

Three classes of artifacts including lithics, ceramics, and historical artifacts were subjected to in-field analysis. Examples of forms used are included in Appendix A. Lithic types monitored were debitage, cores, and formal tools. Attributes monitored on debitage included material type, source, material texture debitage type (flake, angular debris or bipolar debris), flake type (whether a flake was struck from a core or biface), portion, percent cortex, platform type, number of obviously utilized edges, and number and type of retouched edges. Ceramic data monitored included ceramic type, vessel form, and frequency. Wherever possible, surface ceramics were classified as to assemblage type as defined by Mills (1985) and adapted by Lekson (1984). This assemblage-based framework deals with cera-

mics observed in Sierra County and does not depend on architecture. The assemblage system is based on associations and relative proportions. Only assemblages C, D, and E of the original scheme occurred in the project area; these are presented in Table 4.1. Attributes monitored on historical artifacts included item type, content, design, and age.

In every case, all surface prehistoric ceramics were monitored. On smaller sites, every attempt was made to monitor all lithic artifacts. On sites with more than 50 lithic artifacts, this procedure was not practical. Larger sites were monitored by identifiable concentration. Estimates of assemblage totals were subsequently generated. On larger lithic scatters, every attempt was made to locate and collect diagnostic lithic artifacts. Estimated percentages of lithics monitored are included in the site descriptions and in Appendix B. Historic artifacts were consistently monitored in dogleash sample units placed in high and low density areas. Observed and estimated site densities by site and artifact class are included in Appendix B. Density estimation for entire sites was carried out by assuming a sample fraction of 1.0 for ceramics and lithic diagnostics and a sample fraction for debitage and historical items equal to the ratio of the area monitored to the area of the total site. It should be noted that projected surface densities are probably consistently overestimated as sample units were biased towards concentrations. This trend undoubtedly becomes more pronounced as site size increases. As a result, estimated frequencies on large historical sites should be viewed with caution. Surface-monitored lithic data are included in Appendix C.1 through C.6. Lithic diagnostics are illustrated and described in Appendix C.7. Surface monitored ceramic data are presented in Appendix D.1. Surface monitored historical artifact data are presented in Appendix E.

Survey was carried out over an area of approximately 1,050 acres during the weeks of October 28, November 4, and December 2, 1985. The crew was composed of John Acklen (Principal Investigator and Lithic Analyst), Jack Bertram (Paleontologist and Archaeologist), James Enloe (Ceramic Analyst), Colin Garvey (Archaeologist), and Karen Kramer (Archaeologist). The survey required a total of 452 hours which is just over 56 person days.

4.4 PALEONTOLOGY

Paleontological observations were carried out by the entire crew; observations were checked by Jack Bertram. In addition, a local informant with a substantial local paleontological collection was briefly interviewed and the collection examined by Bertram.

Table 4.1 Ceramic Assemblages Observed during the Cuchillo Assessment Study, ACOE, 1986

Assemblage	Dates	Major Types	Minor Types
C	750-1000	Alma Plain Boldface B/W San Francisco Red	Mimbres Trans. B/W Mogollon R/Br Textured Brownware Corrugated Brownware San Marcial B/W
D	1000-1150	Mimbres Classic B/W Corrugated Brownware Alma Plain El Paso Brownware	Mimbres Polychrome "Other" Redware El Paso Bichrome Indented Corrugated Red Mesa B/W
E	1150-1225	El Paso Polychrome Chupadero B/W Corrugated Brownware Indented Corrugated Alma Plain El Paso Brownware	Mimbres Classic B/W "Other" Red Three Rivers R/T Mimbres Polychrome

Based on Mills (1985) and Lekson (1984)

5.0 SURVEY RESULTS

In total, 20 archaeological sites and 72 isolated occurrences were located during the course of intensive survey. Description follows.

5.1 SITE DESCRIPTION

5.1.1 MA 235F-1/LA 53479

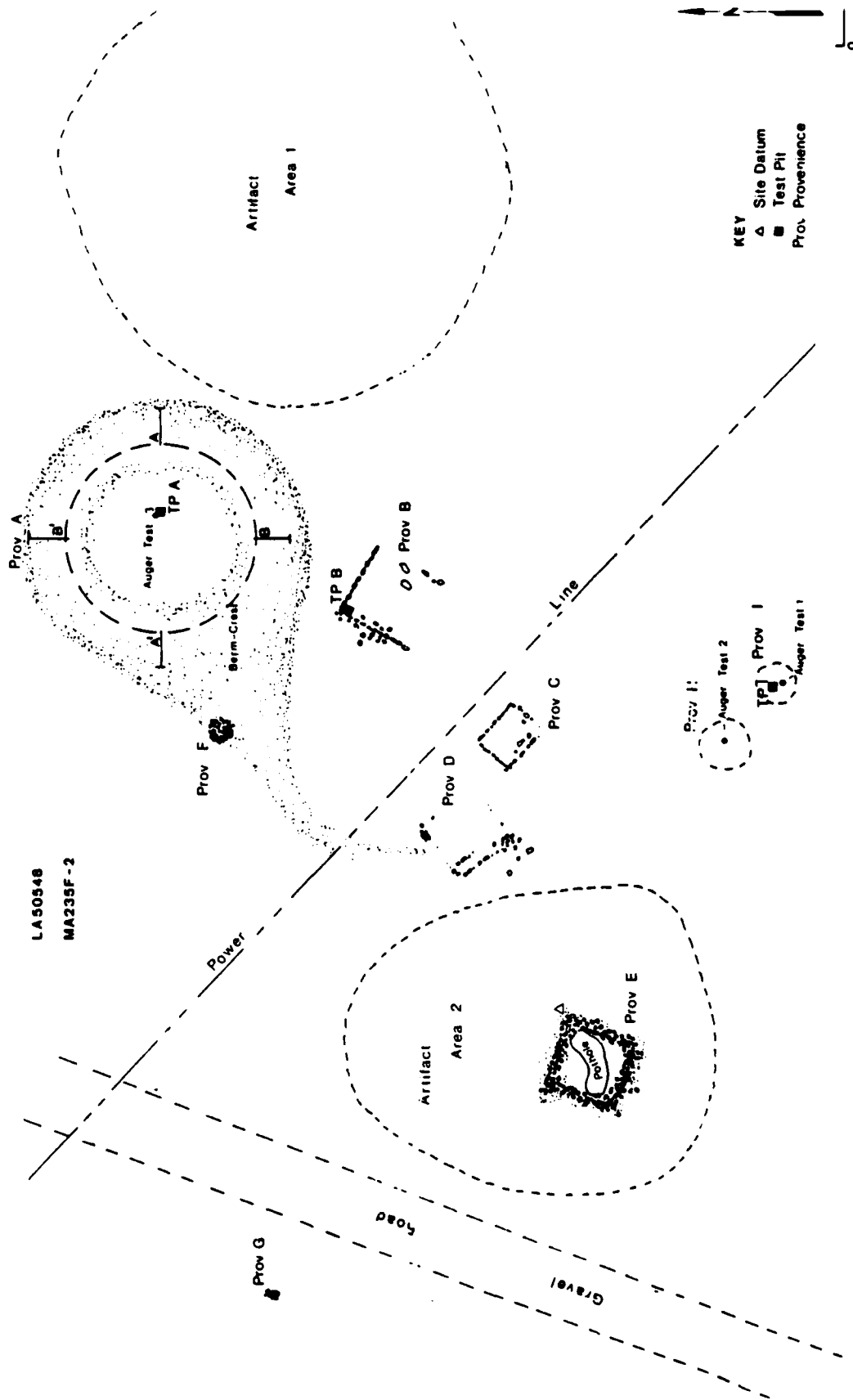
This site consists of three possible components. Located on a limestone knoll are a rectangular structure, a lithic scatter, and two cairns covering a 10x7 m area. The oldest component is an angular limestone clast and slab rectangular foundation of 2x1 m interior dimensions. A 5 m linear rock alignment adjoins its southeast corner and runs south. Wall rubble surrounds the structure and extends 1 m in all directions. Its function is not known, although it is possible that the structure served as a lookout station as the knoll commands an excellent view of the surrounding terrain. The second component is a sparse lithic scatter. Debitage lies on and around the rubble, suggesting it may postdate the structure. The third component is a modern cairn constructed of 20 limestone blocks. The cairn contains a bottle with a color photo of an adolescent male; the photo is labelled January 2, 1971. A message on the back names the knoll Hibbler Mountain. Also in the bottle are a pencil and paper with four subsequent messages. The site is totally intact. No aggradation or deflation has occurred. Due to the proximity of sandstone bedrock, deposition is unlikely. In all probability, the site retains no prehistoric chronometric potential.

5.1.1.1 Lithic Artifacts

The site yielded a total of five pieces of debitage and no tools. Of the five, three were decortication (0-30%) flakes; two were angular debris with no cortex. All three flakes measured for thickness fall between 6-12 mm. Four specimens were chert, while one was determined to be limestone.

5.1.2 MA 235F-2/LA 50548

Consisting of Mogollon structural remains with an associated artifact scatter, the site is situated on a bluff overlooking the Cuchillo Negro Box. Recognized were nine proveniences, which extend across an area of 90x60 m (Figure 5.1). Provenience A is a Great Kiva excavated into a rubble bench. Measured from the crest of the berm, its diameter is between 16 and 14 m. Depth of the circular depression is 1 to 1.5 m. A low mound of cobbles 2 m in diameter is located 1.5 m to the southeast. It appears to be an architectural aspect of the kiva. The area southwest of the kiva was apparently cleared. Spoils were banked to the west, forming a circular plaza area 10 m in diameter. Provenience B is a rectangular room 5.5x6 m in interior dimension. Upright sandstone, limestone, and basalt blocks outline the north and west walls. A small scatter of rubble with blocks averaging 40x30x15 cm suggests that several masonry courses may have been included in the west wall. Provenience C is a rectangular room 3x4 m in



Map Adapted From Sketch Prepared by J.R. Stein

Figure 5.1

interior dimension. Upright elements of limestone and sandstone blocks indicate wall alignments. Elements are typically half the size of those in Provenience B. No rubble is indicated. Provenience D is a structure of 5x5 m in interior dimension. Concentrations of block rubble in a level area indicate the outline of a room. The amount of rubble present does not suggest coursed masonry. Provenience E is a structure 5x5 m in interior dimension. Upright limestone/sandstone blocks and waterworn basalts are laid in parallel rows to form a wall 35-40 cm in thickness. The elements are uniform in size (40x30x15 cm). The low rubble mound outlining the structure suggests coursed masonry forming a low compound wall. The room's floor may have been excavated slightly below ground surface. A large pothole has destroyed most of the central part of the structure, but substantial portions may remain intact. Informant data suggests that the structure was potted in the 1930s. Provenience F is a low circular mound of cobbles 1.5 m in diameter. Its function is unknown. Provenience G, a small cobble pavement of unknown function, covered 1x1 m on the west slope of the bench. Provenience H, a shallow, circular depression 4.5 m in diameter and 20-30 cm below ground surface, is surrounded by a dispersed low berm of gravels. Auger tests call into question a pithouse designation. Although the feature appears cultural, its function is unknown. Lekson (1986: 83-84) reports the presence of small (2x3 m) cleared areas at sites with small roomblocks and pitstructures; the ones he recorded had no berms. Lekson suggests they may have been cleared floors of ephemeral structures, such as ramadas. To our knowledge these kinds of features have not been tested. Provenience I is a shallow, circular depression, 4 m in diameter and 20-30 cm below the ground surface. A low gravel berm surrounds the central area, which is filled with aeolian sediments. Auger tests and the test pit indicate that the depression is a pithouse.

Two concentrations of artifacts (Areas 1 and 2) are apparent. Area 1, east of Provenience A, is 30 m in diameter. Lithics constitute most of the debris. A few brownware and B/W sherds are present. Area 2, a more concentrated scatter, surrounds and extends to the east of Provenience E. Lithic and ceramic debris are present in high density. Both areas probably represent eroded midden deposits. The site is approximately 90% intact (one structure has been potted). Although somewhat deflated, auger tests and test excavation (Section 6) indicate considerable deposition ranging from 60 cm in rectangular structures and 135 cm in the Great Kiva.

5.1.2.1 Lithic Artifacts

Surface debitage monitored at Site LA 50548 totaled 35 specimens; a single projectile point was provenienced and collected. An estimated twenty five percent of the site debitage assemblage was monitored and assigned attributes in the field. Flakes and debris exhibiting no cortex represented 54% of the total assessed debitage population. Thirty seven percent of the debris retained cortex covering up to 50% of the dorsal surfaces. Less than 1% exhibited more than 30% dorsal cortex. Core flakes accounted for 74% of the debitage while the remainder were categorized as angular debris. Six specimens exhibited edge modification, probably due to use. One flake had two edges which displayed use attrition. Flake thicknesses are evenly distributed between four and 12 millimeters (61%).

The remainder (except for one example) fall into a thick category of 12 millimeters or more. Grey chert was best represented (37%), with all cherts accounting for 82% of the assemblage. One obsidian flake was noted. One projectile point accounted for the lithic tool assemblage within the 25% sample. Of generalized San Pedro type, it may pertain to either the Formative or Archaic periods.

5.1.2.2 Ceramic Artifacts

LA 50548 contains seven painted and four unpainted wares. Mimbres Boldface/Transitional (Sudar-Laumbach 1983:86), Mimbres Classic, Red Mesa B/W, Reserve B/W, and San Francisco Red are included. Clapboard corrugated and El Paso Plain are the most common plainwares. The site could be assigned to Assemblage D (1000-1150) (Lekson 1985:61) on the basis of surface-monitored ceramics (the excavated ceramics support an earlier date; see section 6.2.1.2).

5.1.3 MA 235F-3/LA 53480

This site consists of two structural components, one Mogollon and one historic. The site is situated on a bluff overlooking the Cuchillo Negro. The first component consists of two probable masonry structures constructed of large cobble clast alignments. Their form suggests that the southernmost room was rectangular and measured 4x3 m. A small amount of wallfall downslope from the northeast wall may indicate compound wall construction. Five meters to the northeast is a discontinuous alignment in a rough rectangular outline (3x2 m). A few large elements and sparse scattered gravels demark this possible structure. A sparse artifact scatter covers a 12x28 m area in and around the larger room. The second component is a small low cairn 10 m southwest of the first component. No modern artifacts were noted, but preservation suggests that this feature is modern. Although somewhat deflated, the site is completely intact. Deposition of between 15 and 40 cm is considered likely in structure areas.

5.1.3.1 Lithic Artifacts

The lithic assemblage monitored from the site consists of four debitage fragments and a single core. It is believed that 100% of the surface exposed materials were inventoried. Of the four pieces of debris noted on the site surface, two had no cortex, one had less than 30% cortex, and one had between 30% and 70% cortex. Three of the specimens were determined to be core flakes, while one was identified as angular debris. None of the flake edges exhibited cultural modification/attrition. All thicknesses fell between seven and 12 millimeters. Two fragments were manufactured from chert and two from siltstone.

5.1.3.2 Ceramic Artifacts

One plain and one painted ware were found on LA 53480. The painted ware was a White Mountain redware, which dates from A.D. 1000-1300 (Windes 1977:348)

5.1.4 MA 235F-4/LA 53481

An historic manganese mine with two adits (horizontal openings), the site is situated in a steep bluff overlooking the Cuchillo Negro floodplain. One opening is shored with milled timbers and the two openings connect one meter inside the mine, which is about 5 m deep (Figure 5.2). Spoils were discarded downslope, but no artifacts were present. Informant data suggests that this mine was in operation during the early 1940s. Records on file at New Mexico Bureau of Mines list its name as the "Luck Strike" group which was in operation about 1950. The site is completely intact. No cultural deposition is present and no chronometric potential is indicated.

5.1.5 MA 235F-5/LA 53482

This site is a small rock shelter in a limestone cliff 2.5 m above the modern channel of the Cuchillo Negro. The shelter's dimensions are 5x2 m, with a maximum height of 1 m. A 1x2 m area was recently dug and leveled as a sleeping area. A hearth 50 cm in diameter constructed of limestone blocks is at the shelter's opening. Modern charcoal remains are in the hearth. On the west wall is a charcoal Virgin of Guadalupe rendering. The words "Un requerdo de 29 Septiembre" surround the image. Artifacts include a coffee jar from Mexico, a burned soup can, and a bread wrapper. Aeolian and colluvial fill is at least 20 cm deep. The site is 100% intact. While there is no surface evidence, prehistoric deposition of 50-100 cm is possible.

5.1.6 MA 235F-6/LA 53483

A small Mogollon habitation site, 70x30 m in extent, the site consists of three masonry features, a depression originally thought to be a pithouse, and associated lithic and ceramic remains (Figure 5.3). The site is situated on the first gravel terrace above the Cuchillo Negro. Provenience A is an L-shaped block of three rooms indicated by large cobble and upright slab alignments. The rooms are rectangular and 3 m square. Provenience B is a 2.5x2.2 m rectangular alignment composed of large cobble elements. The lack of rubble around the cobble alignments at all three structures suggests cimiento style adobe wall construction. Cimiento construction consists of adobe walls on a base of upright cobbles; it is very common throughout the Sonoran and Chihuahuan deserts of northern Mexico and southern Arizona and New Mexico (Lekson 1984: 85-86). Provenience C is a 2.5x2.0 m rectangular alignment. Although Provenience D was recorded as a possible pithouse, subsequent test excavation did not support that contention. The shallow, circular depression is 2.5 m in diameter. A low berm of small gravels surrounds the depression, which is filled with fine aeolian sediments. Although cultural, the function of the feature is not known. The site is totally intact. Cultural deposits ranging between 24 and 60 cm are anticipated in each structure area.

5.1.6.1 Lithic Artifacts

The monitored lithic assemblage included 16 debitage fragments, two cores, one mano, one chopping tool, and one projectile point. Thirty percent of the surface exposed lithic assemblage was monitored. The single

LA53481

MA235F-4

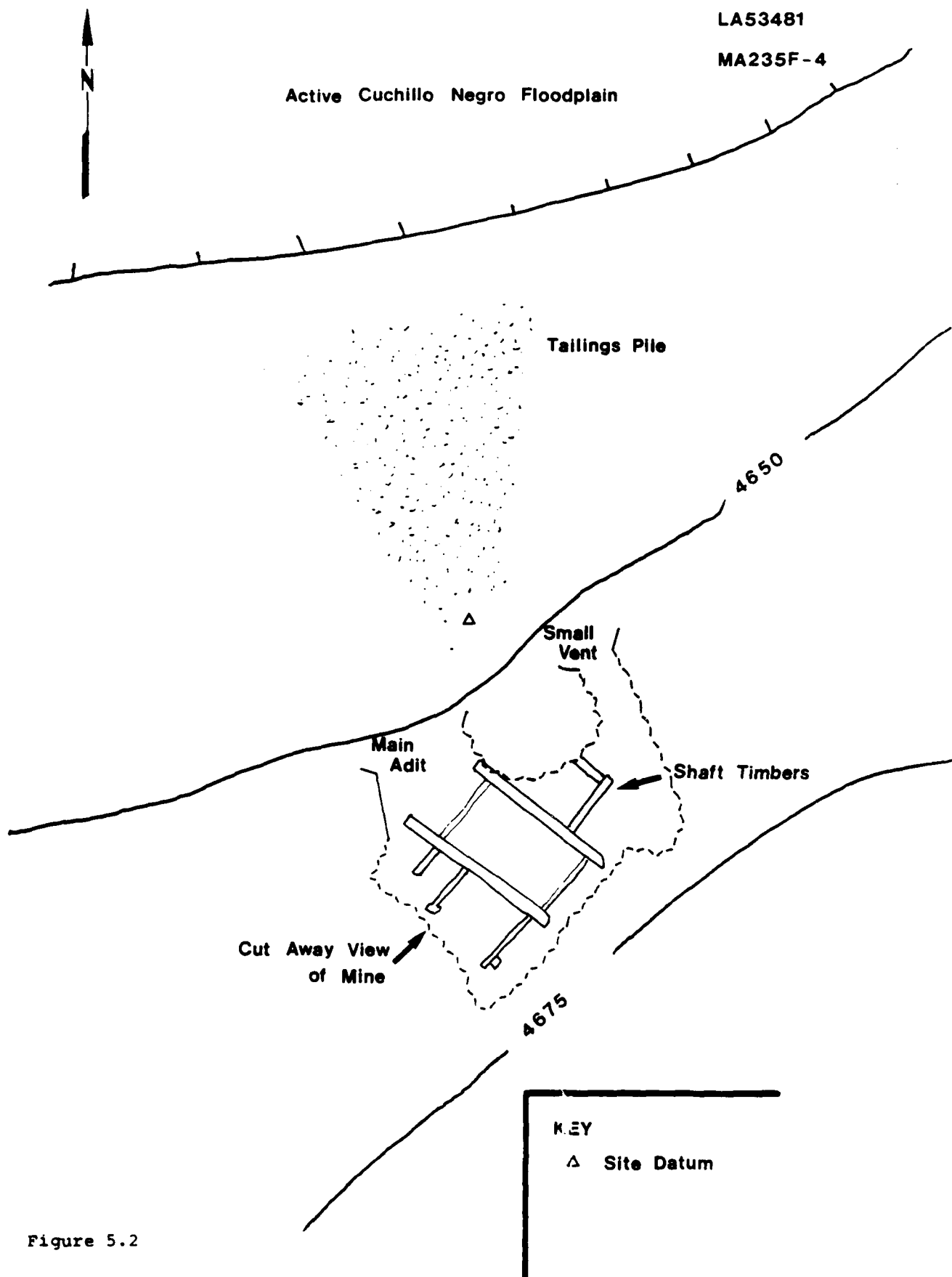


Figure 5.2

LA53483

MA235F-6

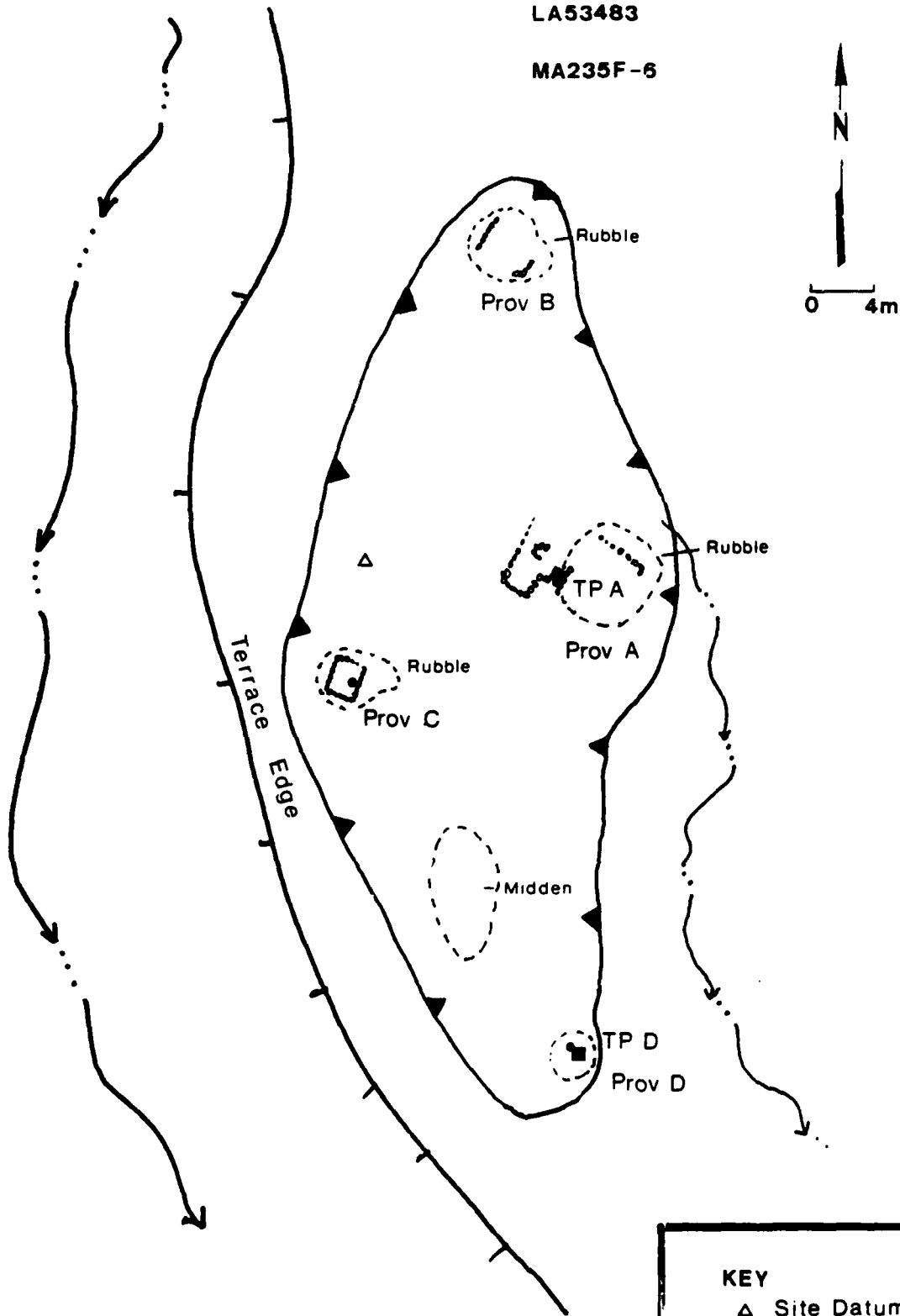


Figure 5.3

KEY

- △ Site Datum
- Site Boundary
- - - Terrace Edge
- Auger Test
- Test Pit

projectile point found in the 30% sample was collected for laboratory analysis. It appears to be the base of either an Agate Basin/Milnesand Paleo-Indian point or else an extremely fine later biface. Monitored debitage mostly exhibited no dorsal cortex (62%) with four specimens (25%) displaying less than 30% cortex. Nearly all debris were determined to be core flakes (87%), with only one blade and one piece of angular debris. Only two specimens exhibited edge modification, presumably due to use. Eighty three percent of the flake thicknesses fell between four and 12 millimeters. Chert dominated the assemblage (56%) followed by siltstone, rhyolite, and basalt.

5.1.6.2 Ceramic Artifacts

Five painted and three plain sherds were found at the site. Transitional Mimbres, Socorro B/W, San Francisco Red, and Clapboard corrugated occurred and suggest a 750-1000 date (Assemblage C) (Lekson 1984:61).

5.1.7 MA 235F-7/LA 50549

This site consists of a 2x2 m square room alignment with an opening in the south wall. Structural elements are flat cobbles and are not buried. Alignments are extremely well preserved. Although this site was originally recorded as a tent base, informant data (Section 7) suggests that it was constructed by a child at play. The site is 100% intact and no artifacts are associated. No cultural deposition is present.

5.1.8 MA 235F-8/LA 50550

The site consists of a bulldozed Mogollon structural site and artifact scatter situated on a low sandy bench above the Cuchillo Negro floodplain (Figure 5.4). The size and number of structural proveniences present is difficult to estimate although informant data suggests that the site may have included surface and subsurface habitation features. Surface lithics and ceramics are distributed in two concentrations. Little rubble or structural debris remains. Although badly disturbed, this site may retain some integrity especially if pit structures are present. The site is at least 95% destroyed. Limited auger tests yielded no evidence of intact, cultural deposits although the possibility cannot be discounted.

5.1.8.1 Lithic Artifacts

The lithic assemblage monitored at the site included 15 pieces of debitage, five cores, one cobble tool, one metate fragment, and one complete micromortar, which was collected. Approximately 25% of the site surface assemblage was monitored and analyzed in the field. Debitage exhibiting no cortex accounted for 80% of the small flake assemblage which totaled 15. Nine of specimens were determined to be core flakes while four were placed in the "blade" category. Two pieces of angular debris were also noted. Only three specimens exhibited edge damage, attributed to use attrition. Most flakes were moderately to considerably thick (8 mm to 15 mm). Chert accounted for 80% of the debris. Chalcedony, siltstone, and basalt each contributed one specimen to the total.

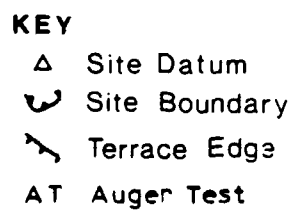


Figure 5.4

5.1.8.2 Ceramic Artifacts

Surface-monitored ceramics from LA 50550 exhibit the greatest variety, with 10 painted types and six plain types represented. Three Circle through Classic Mimbres are present, as well as Chupadero Black-on-White, El Paso Polychrome, and San Francisco Red. El Paso Plain is represented but no corrugated wares. This site could be classed in Assemblages D (1000-1150) and E (1150-1225) (Lekson 1984: 61-62).

5.1.9 MA 235F-9/LA 50547

The site consists of an isolated Mogollon masonry room with an associated lithic and ceramic scatter covering a 20x15 m area. Two right angle alignments form a rectangular foundation 5x3.5 m. Structure elements are large andesite and limestone cobbles and slabs. The lack of rubble suggests adobe upper walls. Lithics and ceramics were concentrated to the southeast of the structure; most lay within a 5x8 m area. Although deflated the site is totally intact. Test excavation indicates approximately 40 cm of cultural deposition in the structure and as much as 20 cm in the artifact scatter.

5.1.9.1 Lithic Artifacts

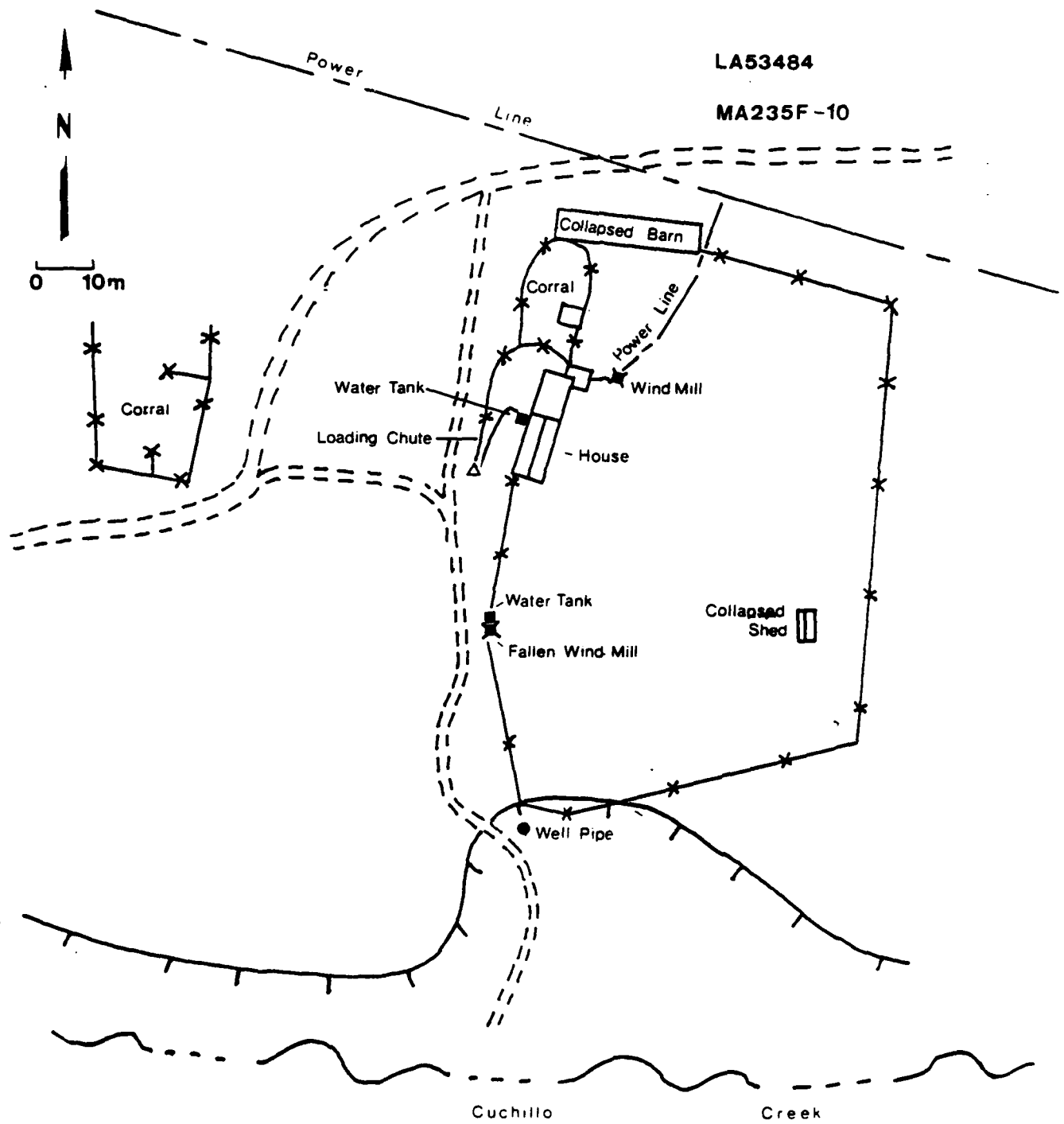
The site yielded information regarding 27 pieces of surface debitage, two cores and one projectile point. One hundred percent of observed material was monitored for attributes in the field; however, the projectile point was collected. A side notched base, it is of generalized San Pedro style and could pertain either to the Archaic or Formative periods. Debitage monitored predominantly exhibited no dorsal cortex (77%) with the remainder displaying less than 30% cortex. Surface debitage was determined to be mostly core flakes (74%) with the remainder being angular debris. Only three specimens exhibited edge modification, which was probably the result of use. Flake thicknesses were fairly evenly distributed between four and twelve millimeters. Grey chert was best represented (33%) with all cherts (regardless of color) accounting for 85% of the debitage. Siltstone was the only other material type recorded.

5.1.9.2 Ceramic Artifacts

A single San Francisco Red and one plain ceramic type were found on the surface of LA 50547. The sample is too small for assignment to an assemblage.

5.1.10 MA 235F-10/LA 53484

The site consists of three historic components (Figure 5.5). Features are dispersed over a 200x125 m area. The site is situated on a low gravel terrace above the Cuchillo Negro. According to a local informant, the site was at one time a Butterfield Stage Stop. That structure was reportedly dismantled and moved to the town of Cuchillo, circa 1940. The second component is a family habitation site dating to the 1940s. The features which date to that time include a stable, a collapsed barn and shed, a probable chicken coop and two windmills, two corrals, fences and roads. Composed of



KEY

△ Site Datum

Two Track

Cuchillo Creek Bank

Fence

Figure 5.5

five stalls, the stable is a 10x5 m unit of wood frame and board construction with a tin roof. The family residence is not in evidence. Informant data suggests that the habitation burned. The third component is a cowfeed and water area that remains in use. The water tank is modern and the site disturbance is related to reuse of older structures for cattle operations. Informant data suggests that the foundations of the old Butterfield Stage Stop are still intact and are obscured by the stable. Although the amount of cultural deposition is not known, the fact that foundations were visible a number of years ago suggests that deposits are not deeply buried. All artifactual materials noted on the surface were very recent. As a result, surface artifacts were not systematically monitored.

5.1.11 MA 235F-11/LA 53485

The site consists of a continuous lithic scatter over a 90x30 m area on a ridgetop. Two loci of concentrated material are separated by a low rise. No features were visible on the surface. The site is totally intact. Some cultural deposition is considered likely; in the absence of test excavation the actual amount is difficult to estimate. Chronometric potential may be limited to a diagnostic projectile point, a massive San Pedro, probably from the Middle to Late Archaic.

5.1.11.1 Lithic Artifacts

The lithic assemblage from the site was composed of 37 debitage fragments, two cores, and one projectile point which was collected. Debitage was monitored in a 5 m diameter dogleash unit. It is estimated that 3% of surface exposed lithic artifacts were monitored. Debitage predominantly exhibited no cortex (84%) while the remaining few specimens exhibited a variety of cortex attributes. Most of the debris represents core flakes (57%); however blades, biface reduction, and angular debris were also noted. Only two specimens exhibited edge damage which could be the result of use. Sixty-six percent of flake thickness measurements clustered between four and 12 millimeters. Chert represented 60% of the debitage sample with chalcedony contributing up to 24% of the population. A variety of rock types make up the remaining assemblage.

5.1.12 MA 235F-12/LA 53486

The site consists of a prehistoric lithic and ceramic scatter 25x15 m located on a gravel terrace. Distribution patterns can not be ascertained because the site has been repeatedly collected. Over the past eight years "quarts" of flakes, surface fragments, points, and sherds were removed, according to a local informant. Much of the material is now centralized in the collector's discard pile. Test excavation revealed no evidence of cultural deposition. The site is probably 95% destroyed by collection and erosion. The site should be subjected to additional testing should dam construction proceed.

5.1.12.1 Lithic Artifacts

The surface lithic assemblage from the site contained 24 pieces of debitage, four cores and one mano. It is believed that all of the observed surface artifacts (100%) were monitored in the field. No lithic collections were made at this locale. The vast majority of flakes from the site exhibited no dorsal cortex (83%). The remaining few retained cortex to a varying degree. Nearly all debris was categorized as core flakes although three blades and one biface reduction flake were noted. A single flake exhibited edge modification which may be attributable to cultural use. Flake thickness appeared to be somewhat variable although 60% of all flakes fall within a range of 4-12 mm. Chert was the material type best represented in the sample at 58% while chalcedony made up 33% of the assemblage.

5.1.12.2 Ceramic Artifacts

LA 53486 produced only one sherd, San Francisco Red, which dates between 550-1150 (Lekson 1984:61).

5.1.13 MA 235F-13/LA 53487

This site is a small, single component historic ranch on the bank of the Cuchillo Negro. Artifacts are dispersed over an 80x110 m area (Figure 5.6). A smaller wire-fenced yard, 70x85 m, defines the extent of feature dispersion. Provenience 1, a three room adobe house of 11x4 m, faces southeast. The west wall is still standing. It is 2 m high and has a wooden door frame with a massive lintel beam in the center. Mounds of melted adobe demark the other external walls. Large andesite cobbles, limestone blocks, and milled floor planks are visible. One large unmilled roofbeam and lintel are present in the interior. Metal and glass trash is scattered to the southeast and east of the house. Across the yard to the northeast is Provenience 2, a small rectangular alignment of large cobbles 1.5x1.5 m. No entrance or internal features are visible. Near the center of the yard is Provenience 3, a poured concrete watering trough 2x0.5 m. On the yard's southside, abutting the fence, is Provenience 4, a pile of 1"x6" boards, probably representing a collapsed shed of which no foundation or internal features are visible. Metal and glass artifacts suggest occupation dates between 1930 and 1940. Historic foundations are completely intact. Little or no cultural deposition is anticipated.

A subsequent on-site interview with a long-time resident of the Cuchillo Valley, Nalda Mitchell, revealed that the site was constructed in the early 1930s by one Ester Huffman who occupied it until 1938. Huffman raised corn, beans, and squash on the Cuchillo floodplain and also herded Angora goats. He was the individual responsible for potting a structure at LA 50548 and who was stopped by Mitchell's father. Eight years ago, a valley resident began to dismantle the residence, Provenience 1. However, Mitchell stopped him and she had him stack the dismantled bricks behind her house, where they remain today. Mitchell was able to identify the function of several features. Provenience 2, the small rectangular cobble alignment, was an outhouse. Provenience 4, the pile of boards, consisted of the remains of a dismantled adobe goat shed. Provenience 5, which had not been

LA53487

MA235F-13

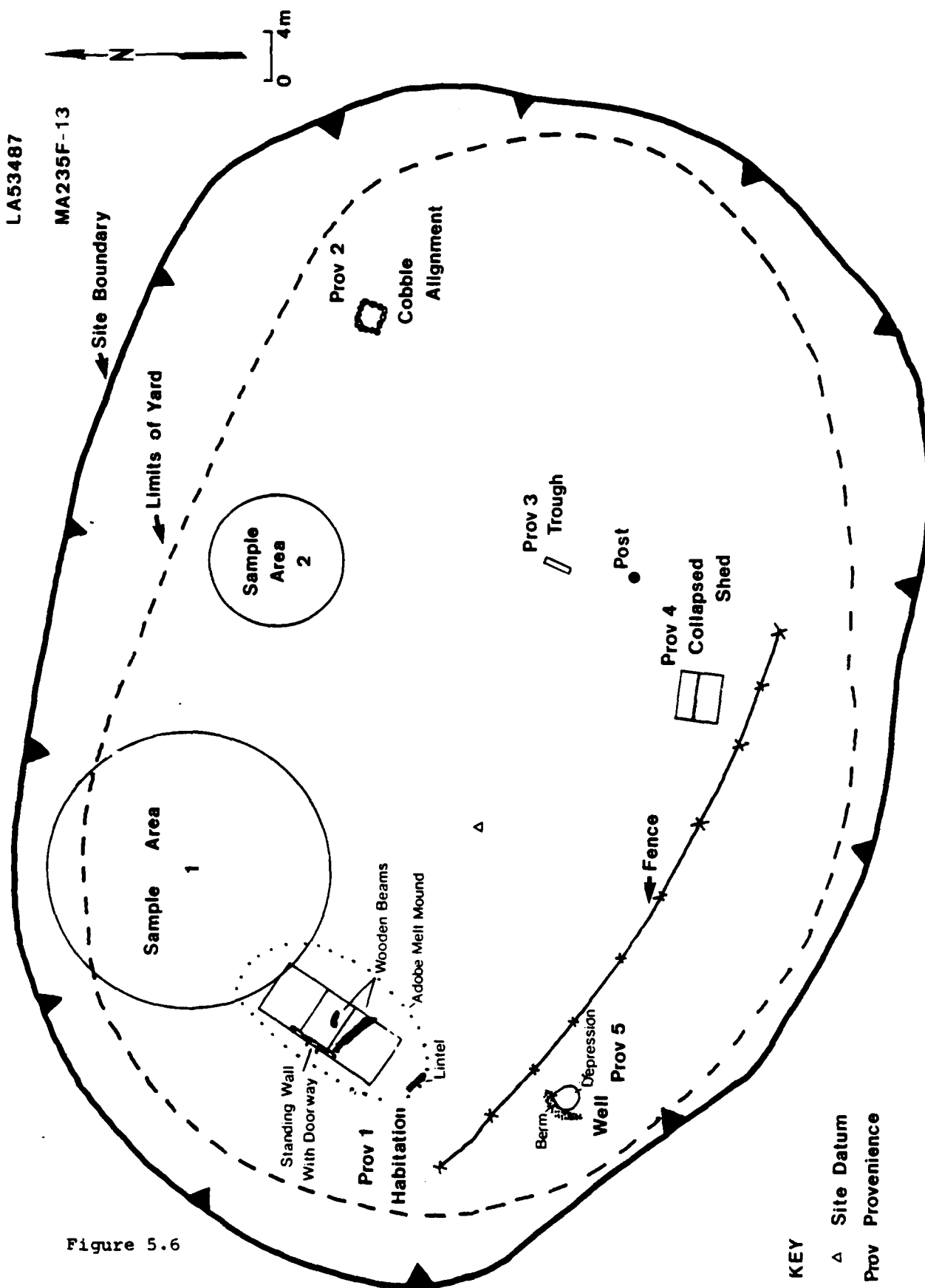


Figure 5.6

KEY

Δ Site Datum

Prov Provenience

recorded, was a dismantled well. Archaeologically, it was visible only as a slight depression with an inconspicuous earthen berm.

5.1.13.1 Historic Artifacts

Historic debris was systematically monitored using 6 m diameter dogleashes at two loci. Locus 1, immediately north of the main structure, contained much brown glass and other culinary kitchen ware and construction materials; Locus 2, at the eastern end of the site, contained essentially similar but sparse materials and correspondingly lower proportions of brown glass.

5.1.14 MA 235F-14/LA 53488

The area consists of a 25x18 m dense lithic concentration and a hearth. The site is situated on an alluvial fan on the edge of the Cuchillo Negro flood plain. Firespalled cobbles and an ashy stain, 50 cm in diameter, define the hearth which is exposed in a shallow erosional drainage. The densest lithic concentration is 10 m southwest of the hearth on a clayey hardpan. A sparser distribution extends to the site's perimeter. Surface artifacts appear to have experienced colluvial transport and probably retain little or no structural integrity. Deposition within the scatter is unlikely; however, artifacts appear to be eroding out of sandy soils immediately east of the main concentration. An informant reported that, ten years ago, wall alignments were visible in areas now obscured by colluvial and aeolian deposit. This area was subjected to test excavation (Section 6) and some cultural deposition in the form of artifacts and subsurface staining is indicated. It was not possible to determine whether structural elements are present. As a result, the percent of the site retaining integrity and chronometric potential cannot be estimated.

5.1.14.1 Lithic Artifacts

The surface monitored lithic assemblage from LA 53488 included 36 pieces of debitage, three cores, one biface, and one projectile point. It was estimated that 25% of the observable surface assemblage was monitored. The single projectile point was collected for laboratory analysis. Of En Medio style, it is a Late Archaic or Early Formative dart point of typical palmate-corner-notched design. The sampled population of debitage yielded 28 flakes with no cortex (77%), three with one to 30% cortex (8%), three with 31% to 70% cortex (8%), two with more than 71% cortex (5%). Approximately 81% of all debris was classified as core flakes. One blade and six pieces of angular debris completed the debitage assemblage. Five flakes exhibited one damaged edge which could have been caused by tool use. Flake thicknesses are generally greater than six millimeters (81%).

5.1.14.2 Ceramic Artifacts

One indeterminate redware sherd was found on this site. This sherd is insufficient for assigning a date.

5.1.15 MA 235F-15/LA 53489

Consisting of a scatter of lithic and ceramic artifacts covering an area 40x20 m, the site is situated in several clearings within a dense mesquite thicket on the first terrace above the Cuchillo Negro. No architectural features are presently visible. However, an informant reported that wall alignments were visible 10 years ago. It seems probable that the site location has experienced some colluvial and aeolian soil formation and that the surface artifact distribution does not necessarily reflect subsurface content. The percentage of the site surface retaining structural integrity is quite low (25%). Although cultural deposition is anticipated, the amount and character could not be estimated in the absence of testing.

5.1.15.1 Lithic Artifacts

The surface lithic assemblage monitored from the site consisted of 27 debitage fragments, four cores, one metate fragment, one mano, and one scraper. It was estimated that 100% of the visible surface materials were inventoried. No lithic collections were made at this locale. Monitored debitage exhibit specimens with no cortex (63%); 1-30% (19%); 31%-70% (11%); and more than 70% (7%). All specimens were either core flakes (85%) or angular debris (15%). Four of the flakes exhibited edge damage which could be the result of cultural use. Thicknesses are clustered between 4-12 mm. The dominant material type is chert (60%), followed by siltstone and andesite (19% each).

5.1.15.2 Ceramic Artifacts

LA 53489 produced two painted ceramic types (Reserve B/W and a Mimbres whiteware) and three plainware types (Indented Corrugated, El Paso Plain and other brown). Assemblage D (1000-1150) or E (1150-1225) could be represented, although the sample size is too small for definitive assignment.

5.1.16 MA 235F-16/LA 53490

Consisting of two prehistoric components covering an area 60x80 m in size (Figure 5.7), the site is located on the first terrace above the Cuchillo Negro. Spatially designated into two proveniences because of a perceived distinction in lithic material quality and in distributional patterns, Provenience A (30x25 m) includes two architectural features. Feature A-1 is a rectangular rock alignment foundation of 4x2 m. Walls are coursed; elements are large cobbles. Feature A-2 is a rubble scatter of 5x5 m with two visible structural alignments. The presence of rubble around both structures may indicate compound wall construction. Several lithics and Mogollon ceramics are sparsely distributed in Provenience A. Provenience B is a (possible Archaic) lithic scatter, 65x50 m in extent. A dense locus is surrounded by a sparse scatter. The site is completely intact if somewhat deflated. Although the site was not tested, cultural deposition of between 20 and 60 cm is anticipated in structure areas. Significant cultural deposition is not expected in the lithic concentration.

LA53490

MA235F-16

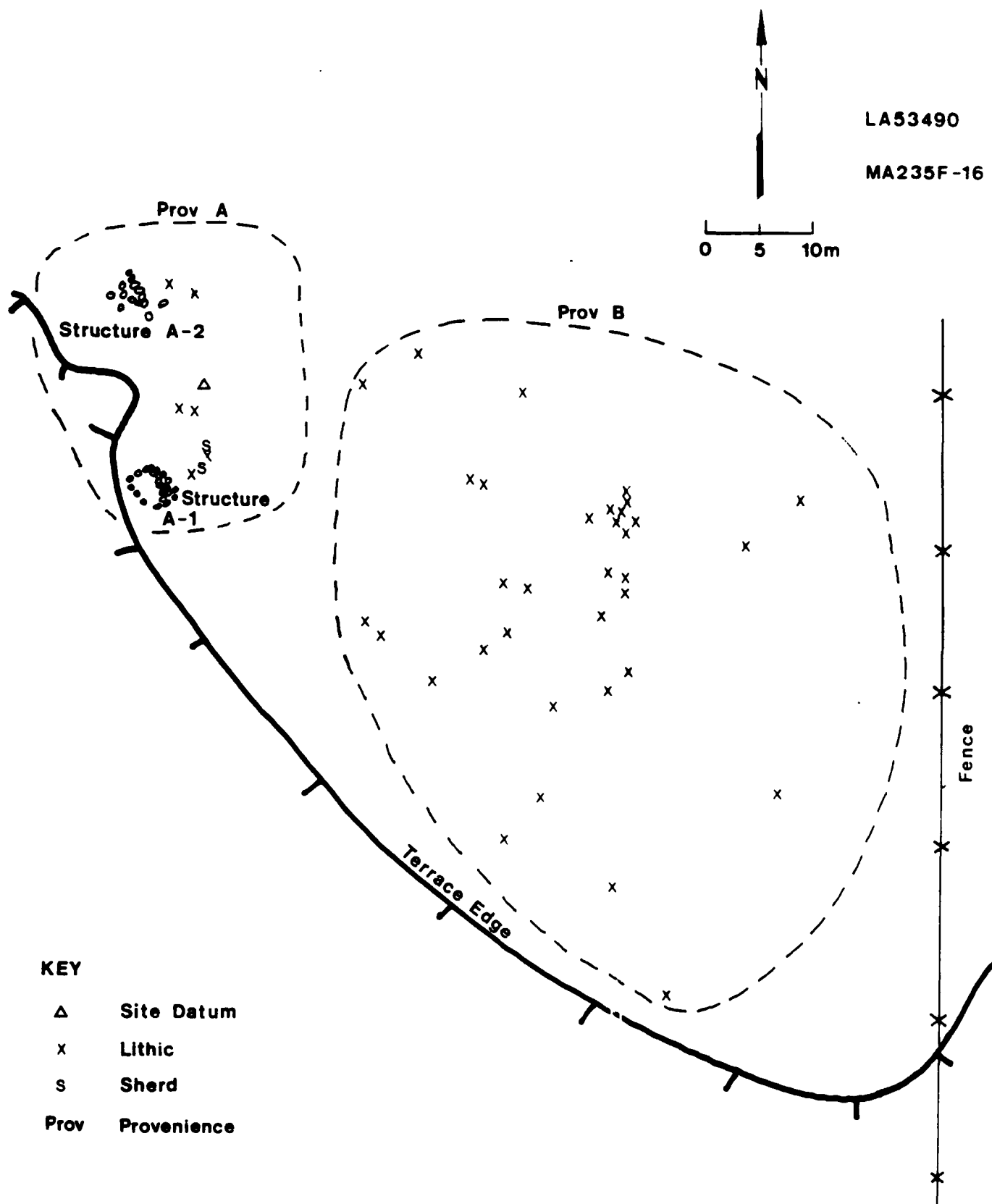


Figure 5.7

5.1.16.1 Lithic Artifacts (Provenience A and B)

Site LA 53490 yielded information regarding 35 pieces of surface debitage, three cores, two bifaces, one denticulate, one scraper, and one projectile point. It was estimated that 100% of all visible materials were inventoried. One scraper and one projectile point were collected and analyzed in the laboratory; neither proved to be diagnostic. Sixty percent of the debitage exhibited no cortex while 23% had cortex covering between 1-30%. Debitage types included core flakes (74%), blades (11%), angular debris (11%) and a biface flake (4%). Nine of the specimens exhibited edge damage which could be attributed to cultural use. Flake thicknesses clustered between four and 12 millimeters (76%). Chert is the most represented material type (49%) followed by chalcedony (17%), rhyolite (11%), siltstone (8%), andesite (8%), and basalt (6%).

5.1.16.2 Ceramic Artifacts

LA 53490 produced five obliterated corrugated sherds of unknown type and date. All five sherds were present within Provenience A.

5.1.17 MA 235F-17/LA 53491

Distributed over a 50x70 m area, the site consists of a large, dismantled historic structure and associated trash and is situated in the floodplain of the Cuchillo Negro. The maximum outside dimension of the structure is 45x15 m. A coursed cobble rectangular foundation 15x20 m has a 25 m contiguous wall from the northeast corner. A dense midden concentration 12 m in diameter is adjacent south of the structure, and another larger, but less dense, trash concentration is adjacent north of the southeast structure. The general artifact scatter is very light; glass and metal artifacts suggest a post-1930 to 1940s occupation. The historic foundations are completely intact. Cultural deposition is surficial, thus, this structure may be the remains of a public building or business. Chronometric potential is limited to diagnostic artifacts and archival review.

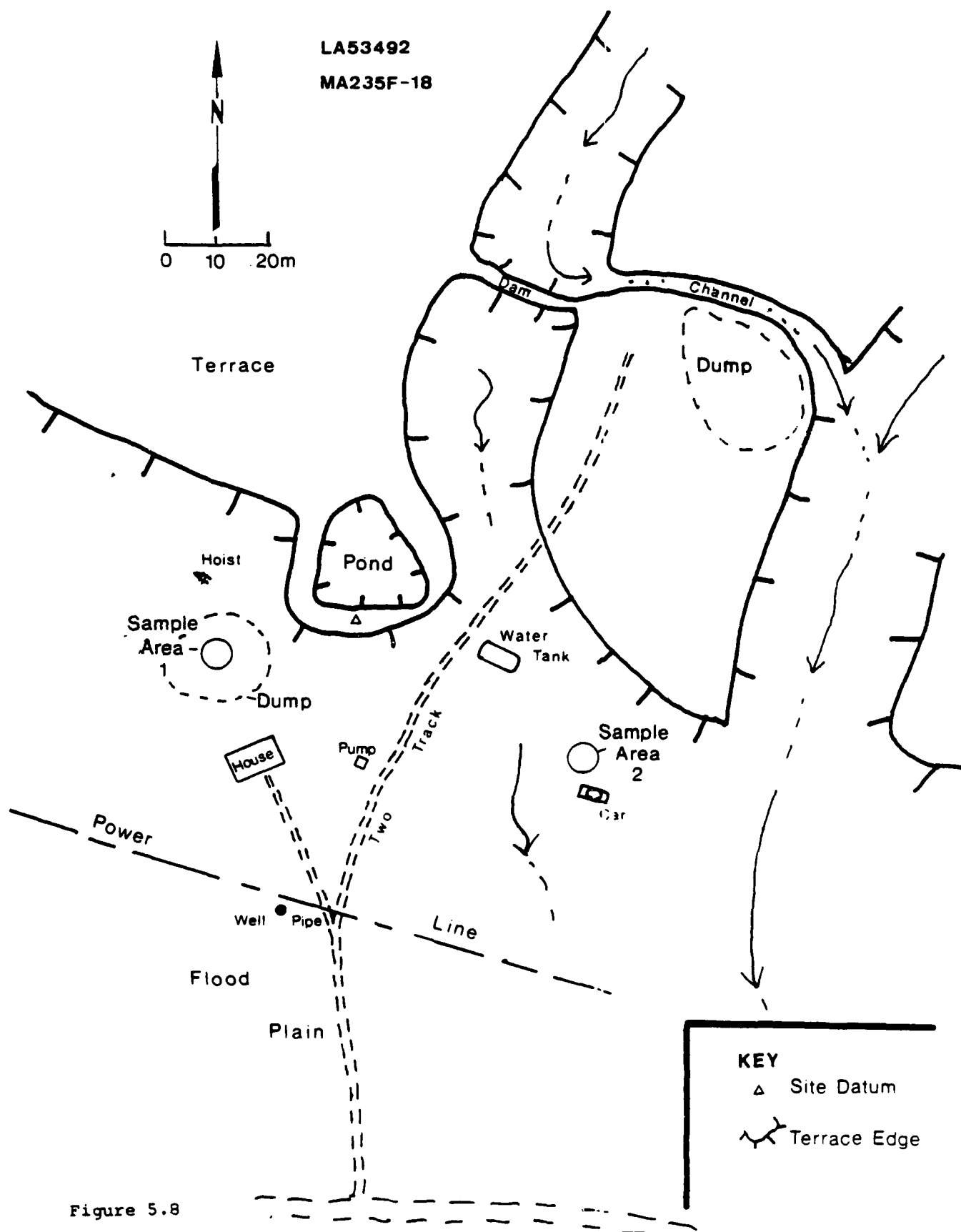
5.1.17.1 Historic Artifacts

Historic artifacts include aqua, brown and green glass, cans, enamel and glazed wares, and crockery.

5.1.18 MA 235F-18/LA 53492

The site consists of a 20th century historic habitation and associated debris which covers a 140x100 m area (Figure 5.8). The site is located on a bench just above the Cuchillo Negro floodplain. The stone masonry habitation (4.5x9 m) has standing walls and a tar paper and tin roof. The house is electrically wired and has pvc pipe connected to a pump and tank to provide running water. Doors and windows were secured when the habitation was abandoned. It was built in the early 1900s and occupied until the 1970s. Associated features include a large metal above-ground water tank, a pile of milled lumber, an earthen dam, a water diversion

LA53492
MA235F-18



feature, a derrick constructed of a Model T frame and heavy cable, and two middens. The site is intact; cultural deposition is unlikely. Historic artifacts largely reflect the latest occupation. Archival research provides the best source of chronometric data. According to an informant, the habitation was constructed in the early 1900s by a homesteader and subsequently abandoned. The site was reoccupied in the late 1950s or early 1960s and abandoned once again in the 1970s.

5.1.18.1 Historic Artifacts

The trash dump closest to the house contains 1950s-1970s plastic, bottles, can, rubber fragments, and one purple glass sherd. It was monitored in a 3 m radius dogleash. Also monitored by a single 3 m radius dogleash is a dump 120 m northeast of the house. This dump includes fencing, auto parts from different vehicles, building and some domestic debris, and a commode. Other artifacts include a wagon, a burned 1951 Chrysler, building materials, a washing machine with legs, and light scatter of domestic trash.

5.1.19 MA 235F-19/LA 53493

A single component habitation historic site, covering an area 60x90 m, situated on the first terrace above the Cuchillo Negro (Figure 5.9) and adjacent to the present day town of Cuchillo, the site is probably a part of that community. All structural proveniences have been dismantled and only the cobble foundations remain. Features include two residential foundations 45 m apart. Habitation mound A, 7x10 m, is a cobble base covered in adobe melt. A light scattering of domestic debris surrounds the structure. Habitation mound B is 4x5 m; dense domestic debris immediately surround the cobble foundation. Other features are two cobble foundations of unidentified function, a privy, a 2x2 m depression associated with a small cobble foundation, a midden, and a light (historic) trash scatter. Historic artifacts suggest an occupation in between 1900 and 1930. Historic foundations are intact; little subsurface deposition (5-10 cm) is anticipated. Historic artifacts and archival research will provide the best sources of chronometric data.

5.1.19.1 Historic Artifacts

Trash includes roofing tin, milled lumber, automobile parts, a Model A hood, purple glass, lapped seam cans, and other domestic debris. Two areas were monitored by 3 m radius dogleashes. The first, Area 1 (near structure A), contained construction materials and crockery. Area 2 (on structure B) yielded a great variety of culinary and kitchen items, numerous items of clothing, and construction materials.

5.1.20 MA 235F-20/LA 53494

The site consists of a rock shelter with possible prehistoric cultural deposition, together with a recent historic component consisting of two aluminum cans and a hearth. Although no prehistoric artifacts are visible on the surface, a substantial soil fill covers the floor of the shelter and the ceiling is fire-blackened beyond the extent probable with the recent

LA53493

MA235F-19

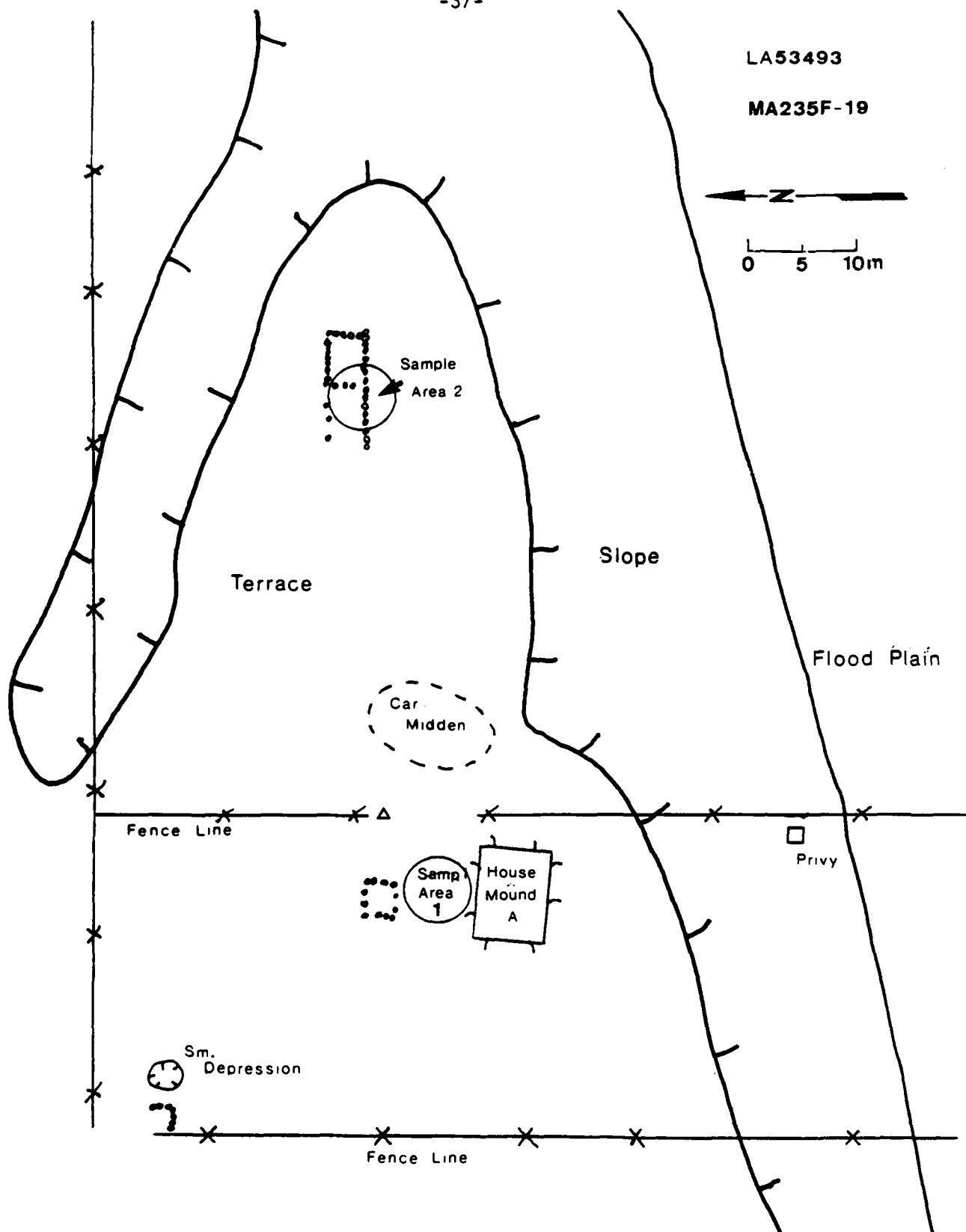


Figure 5.9

KEY

- △ Site Datum
- ⊙ Cobble Foundation

hearth. Older cultural fill is considered likely. Aside from wood rat disturbance, the site appears intact. Cultural deposition could potentially range in between 50 cm and 100 cm.

5.2 SITE SUMMARY

Sites encountered on the Cuchillo Negro inventory survey (Table 5.1) can be classified into five typological groups:

- artifact scatters
- structural Mogollon sites
- historic sites
- rock shelters
- site of unidentified function

Scatter sites were located on low gravel terrace edges north of the Cuchillo Negro and on shallow colluvial slopes between the terraces and alluvial bottomlands. Two sites classed as scatters (LA 53488 and LA 53489) were reported by an informant as having architectural components (see Section 7.1).

Mogollon structural sites range in size from one room to six total rooms. Most structures are isolated rooms and pithouses. A single three-room block was located at LA 53483; a "Great Hole in the Ground" is present at LA 50548. A wide range of extramural features are suspected or known for these sites; they include large and small cleared areas, pavements, cleared depressions other than pithouses, and sparse middens. Architectural forms include cobble and adobe, cimiento, and cobble over upright slab construction. All sites are located either on terrace or bench locations. With a single exception, LA 53480, all sites have a southern orientation. Sites cluster closely around known or suspected springs formed by the hard rock gorge fault.

Along other western Rio Grande tributaries large Mimbres and El Paso/Black Mountain sites are limited to lower drainage segments. Large sites and site clusters also occur in middle segments, such as the project area, above lower box canyon constrictions. Factors important to site location probably include permanent water and arable floodplains (Lekson 1984: 22-23).

Historic sites included residences, a multicomponent stage stop/residence, a rectangular rock alignment built by a child, a manganese mine, and a site of unidentified function which could have been a residence, public building, or business. Most of the historic sites are located in alluvial bottomlands. Most have a southern exposure.

Two possible rock shelters were recorded in the hard rock gorge. Both were recently occupied as camp locations. Although neither exhibited prehistoric remains, both contained soils and hence, the potential for prehistoric deposition.

A single site, LA 53479, could be assigned no function. Located on a hilltop, it consisted of a possible reduced structure, a sparse lithic

Table 5.1 Site Attributes Tabulated by Landform, Cuchillo Assessment Study, ACOE, 1986

Field #	LA #	Site Type	Cultural Application	Landform	Exposure	Projected # of Surface Artifacts
235F-1	53479	structural	prehistoric unknown, hist.	hilltop	indeterminate	5
2	50548	multiroom structural	Mogollon	bench	southern	175
3	53480	one room structural	Mogollon	bench	western	11
4	53481	mine	historical	cliff face	north western	0
5	53482	rockshelter	prehistoric ?	cliff face	southern	0
6	53483	multiroom structural	Mogollon	terrace	south eastern	70
7	50549	structural	historical	terrace	eastern	0
8	50550	multiroom structural	Mogollon	low bench	southern ?	95
9	50547	one room structural	Mogollon	bench	south eastern	35
10	53484	multiple structural	historical	low bench	southern	0
11	53485	scatter	Archaic	terrace	southern	300
12	53486	scatter	Mogollon	terrace	southern	30
13	53487	multiple structural	historical	shallow slope	southern	4400
14	53488	scatter	Archaic	shallow slope	southern	150
15	53489	scatter	Mogollon	shallow slope	southern	41
16	53490	multiple structural scatter	Lithic indeterminate, Mogollon	terrace	southern	48
17	53491	structural	historical	floodplain	indeterminate	?
18	53492	multiple structural	historical	terrace	eastern	20,640
19	53493	multiple structural	historical	floodplain	southern	47,500
20	53494	rockshelter	historical/in-determinate	cliff face	northern	0

scatter and a historic cairn. It could possibly have served as a lookout tower or shrine.

5.2.1 Surface Lithic Artifacts

The surface-monitored lithic artifact assemblage totaled 307 specimens. Of the 307 total, 261 items were debitage, 25 were cores, four were manos, six were projectile points, three were bifaces, two were metate fragments of indeterminate type, two were scrapers. Single lithic tools included a chopper, mortar, denticulate, and cobble tool. Chert was the dominant material type (68%). Chalcedony and siltstone (9% each) constituted the next most frequently represented categories and were followed by a variety of locally available materials. The availability of chert, chalcedony, and siltstone in local outcrops and creek cobbles is unknown. Across the vast majority of sites, surface debitage appears to be the result of interior lithic reduction as indicated by a general lack of primary cortical debris. Ten out of 11 sites exhibit a flake population with no dorsal cortex and very little edge damage as a result of cultural use. Thicknesses cluster between four and 12 millimeters, indicating that fine work and biface thinning were not the focus of stone working activity. This notion is further supported by the lack of biface reduction flakes and the low proportion of blades. One site (LA 53485), an Archaic lithic scatter, did have blades as 21% of the debitage assemblage. There were few pronounced correlations between debitage material type frequency and core material type frequency at any given site. For instance LA 50547 yielded one core of mottled chert, yet no flakes of mottled chert were noted in the assemblage. There were exceptions to this observation, primarily site LA 50550 (grey chert correlation); Site LA 53486 (white chert correlation-weak); Site LA 53488 ("generic" chert correlation); Site LA 53489 ("generic" chert correlation); and Site LA 53490 ("generic" chert correlation). Significance of these observed correlations cannot be evaluated because of the very small sample size and the lack of specific control on source analysis.

5.2.2 Surface Ceramic Artifacts

Monitored surface ceramics exhibit substantial variability in painted types. Much of this variability is contributed by one site, LA 50550 (MA 235F-8). Contrary to our expectations, unpainted brownwares were not much more frequent than painted wares. This ran counter to biases we anticipated would result from frequent, casual amateur collection biased toward the greater visibility of painted wares. The excavated sites with small sample sizes, however, did sometimes have equivalent numbers of painted wares and plainwares (see section 6.4.2). Greater durability of painted ceramics may be a factor in their frequency, as brownwares are probably lost more rapidly to erosion. The paste used in painted wares tends to be somewhat harder than that used in utility wares; the generally smoother surface finish in painted wares may also serve to reduce the adverse effects of postdepositional moisture and freezing. LA 50548 and associated sites may indeed have more painted ceramics than do more distant habitation sites, due to their association with the Great Kiva. In broad terms, surface ceramic observations indicate a Middle to Late Mimbres placement for site LA 50548, a somewhat earlier placement for LA 53483, and a long dura-

tion for LA 50550. Other sites with ceramics yielded surface samples too small to support generalization.

5.3 ISOLATED OCCURRENCES

Isolates encountered on the Cuchillo Negro inventory survey (Table 5.2) can be classed into four typological groups which are distinct in setting, function, and content:

- overlook/ridgeline: lithics
- overlook: cairns
- upland flats: older historic trash
- valley bottom: recent domestic trash

Overlook ridgeline lithics tended to be utilized flakes of good material; some were retouched, and a few represented tool or core fragments. Of 25 lithic isolates recorded, only two occur in upland flats, two at the colluvial edge of valley-bottom deposits, and three within those bottom deposits. These latter may indicate buried sites. Of the 10 cairns recorded, none occurs on upland flats and only one occurs in valley bottom context. Some cairns are clearly quite old.

Of the 21 probably older (pre-1930) historic trash isolates recorded, the bulk (16) occur on upland flats, with the remainder scattered evenly between valley bottom and slope/ridge/arroyo settings. The upland isolates appear mostly to reflect roadside or trailside camps and dumping during the period 1880-1930.

Of the 16 relatively recent isolates, almost all were recorded from valley bottom context. Several very recent (post-1960) dumping episodes were recorded as isolates, because they serve to indicate the rate of ongoing alluviation within the Cuchillo Negro bottoms. Buried automobiles, probably abandoned within the last 15 years, indicate substantial ongoing deposition in low-lying areas, as did buried fence lines and buried dressed timbers encountered during the survey.

5.4 OBSERVATIONS OF PALEONTOLOGICAL RESOURCES

Paleontological resources are present in situ everywhere the late Paleozoic (and perhaps Cretaceous) rocks outcrop in the study area. No particularly rich or unusual formations were noted. Most fossils appear to be litoral or benthic brachiopods, pelycypods, and echinoderms.

Paleontological finds are also present out of context in stream gravels and in the conglomerates formed from older outwash cycles. An informant possessed several exceptionally fine fossils which appeared to be bryozoan in origin; these were in broken cobbles. Recent paleontological potential is probably restricted to numerous fossil or subfossil woodrat middens noted in crevasses in the Cuchillo Box; several deep caves in the Box both within, and just downstream of the study area could contain Holocene fossil deposits, especially of vertebrates and pollens. Evidence of solution pockets and fragments of cave furniture were encountered in the Box, indicating possible limestone sealed traps, dens, or other recent fossil concentrations.

Table 5.2 Isolated Occurrence Description by Landform, Cuchillo Assessment Study, ACOE, 1986

I.O. #	Physiographic Setting	Description
MA.235F-10-1	gravel ridge top	aqua whiskey bottle, solderdot can
MA.235F-10-2	upland flats	aqua bottle, solderdot can
MA.235F-10-3	upland flats	white chert retouched flake
MA.235F-10-4	upland flats	aqua medicine bottle
MA.235F-10-5	DELETED	
MA.235F-10-6	lateral arroyo bottom	cobalt glass fragment, worked
MA.235F-10-7	lateral arroyo bottom	white and brown glass scatter
MA.235F-10-8	valley bottom	white chert secondary flake
MA.235F-10-9	lateral arroyo bottom	large complete horseshoe
MA.235F-10-10	valley bottom	siltstone double concave endscraper and flake
MA.235F-10-11	gravel ridge top	tertiary biface flake
MA.235F-10-12	gravel ridge top	collapsed cairn of 6 large cobbles
MA.235F-10-13	gravel ridge top	cairn of 4 large cobbles
MA.235F-10-14	gravel ridge top	white banded chert secondary flake
MA.235F-10-15	gravel ridge top, overlook	collapsed cairn of 25 large cobbles
MA.235F-10-16	north slope of high knoll	white chert secondary flake
MA.235F-10-17	valley bottom	white stoneware plate sherd
MA.235F-10-18	gravel ridge top	cairn of 30 limestone blocks
MA.235F-10-19	top of knoll	utilized white chert primary flake
MA.235F-10-20	valley bench	2 pieces silicified wood angular debris
MA.235F-10-21	valley upper bench	white oolitic chert tertiary flake
MA.235F-10-22	valley upper bench	white oolitic chert retouched secondary flake
MA.235F-10-23	valley upper bench	white chalcedony flake fragment, repatinated
MA.235F-10-24	valley upper bench	grey-white chert secondary flake, repatinated
MA.235F-10-25	valley upper bench	2 tertiary flakes of quartzite and chalcedony
MA.235F-10-26	valley upper bench	3 secondary flakes; different materials
MA.235F-10-27	valley lower bench	secondary white chert flake
MA.235F-10-28	valley lower bench ridge	secondary white chert flake
MA.235F-10-29	valley lower bench	2 white chert flakes, primary and secondary
MA.235F-10-30	valley upper bench	grey chert multiple scraper on flake
MA.235F-10-31	valley lower bench ridge	purple glass scatter
MA.235F-10-32	gravel ridge top	cairn of 40 large cobbles, collapsed
MA.235F-10-33	steep ridge top	cairn of 30 large cobbles, collapsed
MA.235F-10-34	valley bottom edge	biface fragment of red chert
MA.235F-10-35	valley bottom	sanitary land can
MA.235F-10-36	valley bottom	aqua sherds

Table 5.2 Continued

I.O. #	Physiographic Setting	Description
MA.235F-10-37	edge of active creekbed	1941 GMC truck, model EC10L
MA.235F-10-38	valley bottom	iron chaise lounge component
MA.235F-10-39	valley bottom	sanitary food can
MA.235F-10-40	edge of abandoned meander	approximately 1940 sedan
MA.235F-10-41	valley bottom edge	cobble unifacial mano
MA.235F-10-42	valley bottom	1930 truck cab, stove, barrel, trash
MA.235F-10-43	valley bottom edge	cobble alignment, polygonal core found in bulldozed area
MA.235F-10-44	valley bottom edge	white chert flake, heat-treated
MA.235F-10-45	valley bottom	basalt cobble biface
MA.235F-10-46	valley bottom, active channel	truck suspension parts
MA.235F-10-47	valley bottom	75m ² trash scatter, ca. 1950
MA.235F-10-48	valley bottom	20m ² trash scatter, ca. 1950
MA.235F-10-49	valley bottom	small trash scatter, ca. 1945-1960
MA.235F-10-50	valley bottom	truck fender, sanitary cans, ca. 1950
MA.235F-10-51	valley bottom, active channel	1959 Edsel sedan, 3/4 buried
MA.235F-10-52	valley bottom, active channel	1960 Galaxy sedan, on side, 1/2 buried
MA.235F-10-53	valley lower bench ridge	wooden cross (1.7 m high) in cairn
MA.235F-10-54	valley lower bench edge	cairn of 16 cobbles, collapsed
MA.235F-10-55	valley lower bench edge	large cairn of 70 cobbles, collapsed
MA.235F-10-56	valley bottom	Irrigation ditch, abandoned @ 1945
MA.235F-10-57	valley bottom	cairn of 20 cobbles, intact
MA.235F-10-58	valley bottom	large, recent (post-1960) dump
MA.235F-10-59	valley bottom	chert secondary flake
MA.235F-10-60	upland flats	chert secondary flake
MA.235F-10-61	upland flats	aqua glass scatter
MA.235F-10-62	upland flats	solderdot can
MA.235F-10-63	upland flats	2 wornout horseshoes
MA.235F-10-64	upland flats	solderdot can and wornout horseshoe
MA.235F-10-65	upland flats	handblown purple whiskey bottle, scissors, large wornout horseshoe
MA.235F-10-66	upland flats	reagent bottle, kerosene lamp parts, wornout horseshoes, solderdot cans, cans labeled "sanitary"
MA.235F-10-67	upland flats	aqua bottle neck, molded
MA.235F-10-68	upland flats	2 wornout horseshoes, coke bottle neck, copper tire repair kit part?
MA.235F-10-69	upland flats	aqua glass scatter and horseshoe
MA.235F-10-70	upland flats	2 molded-seam bottle necks, cap-top
MA.235F-10-71	upland flats	large solderdot can
MA.235F-10-72	upland flats	pint liquor bottle bottom, oval

6.0 THE TESTING PHASE

6.1 TESTING STRATEGIES AND PROCEDURES

Testing strategies in the form of a list of priorities developed in conjunction with ACOE archaeologists emphasized determination of depth and character of cultural deposits at Mogollon structural sites and, to a lesser extent, at artifact scatters (Table 6.1). Testing at the historic and anomalous sites was deferred. This was necessary due to the limited amount of time available and the complexity of the prehistoric sites, especially in the vicinity of the proposed construction area.

Test pits on structural sites were biased towards structures. Only one test pit (Test Pit B, LA 50547) was placed in an extramural location. Test pits on scatter sites were biased primarily towards possible structure locations and secondarily, towards artifact concentrations.

Primary testing emphasis was placed on LA 50548, which was known to contain a Great Kiva, at least one pithouse, and several surface rooms. LA 53483, the second largest Mogollon structural site in the project area, was also given a high priority. LA 50547 provided the opportunity to investigate deposition at a one-room structural site. LA 53486, which has been heavily collected by a resident, was selected to determine whether or not subsurface deposits are present on scatter sites located on gravel terraces. LA 53488 was identified by an informant as an artifact scatter with a buried structural component. Test excavations were placed in an effort to isolate structural remains. LA 50550 is a structural site of unknown size which was bulldozed a number of years ago. Testing was designed to determine whether or not the site retained any depositional integrity.

Tests included auger probes and the excavation of 1 m² pits. All test excavations were plotted on site maps using a transit and stadia. Soil characteristics and strata were systematically described using standardized scientific terminology and a Munsell soil color chart. Of every test pit excavated, at least one wall was photographed and profiled. Testing notes and profiles are curated with artifacts collected at the Museum of New Mexico. Prior to backfilling, the bottom of each test pit was lined with black plastic to indicate depth and placement; the surface of the tested areas was restored as nearly as was possible to conditions prior to excavation.

All collected artifacts were catalogued according to Museum of New Mexico standards; all were analyzed. Although laboratory analysis essentially replicated in-field analysis described in Section 4.3.2, lab results should be viewed as more reliable. Lithics were examined using 10x magnification and ceramics were analyzed with reference to published type description and type collections. Lithic and ceramic artifacts are discussed by provenience and site in the body of the testing chapter. Lithic attributes are tabled in Appendices C.1.1 through C.1.6. Excavated ceramics are tabled in Appendix D.2.

Table 6.1 Testing Priorities and Level of Effort Expended, Cuchillo Testing Phase, ACOE, 1986

Priority	LA Number	Cultural Affiliation	Site Type	Condition	# of Test Pits	# of Auger Tests
1	LA 50548	Mogollon	Great Kiva multiroom habitation	largely intact	3	0
2	LA 53483	Mogollon	multiroom habitation	intact	2	0
3	LA 50547	Mogollon	single room habitation	intact	2	0
4	LA 53486	Mogollon	artifact scatter	heavily collected	2	0
5	LA 53488	Archaic	artifact scatter	eroded	2	0
6	LA 50550	Mogollon	structural	bulldozed	0	8

A total of 227 man hours was expended during the testing phase. Work was conducted under the direction of John C. Acklen, Principal Investigator. Crew members included James Enloe, Colin Garvey, Karen Kramer, Victor Contreras, Charles Carrillo and Peggy Gerow.

6.2 TESTING RESULTS

6.2.1 MA 235F-2/LA 50548

A total of three 1 m² test pits was placed in structural proveniences at LA 50548. Test Pit A was situated in the eastern quadrant of Provenience A, a Great Kiva. Depression profiles (Figures 6.1 and 6.2) indicate the kiva has a probable diameter of between 16 and 19 m. Profile locations are indicated in Figure 5.1. The test pit was excavated in 14 levels to a depth of 135 cm below ground surface. (Figure 6.3). At that level a light colored, slightly ash stained, 2-3cm thick prepared adobe surface was encountered. Subfloor tests revealed sterile gravel substrate. The soil matrix consisted of a compacted clayey silt with occasional gravel inclusions. Towards the bottom of the excavation, soils became less compacted and gravelly and more loamy; this is probably decayed roof fall. Occasional flecks of charcoal were encountered. A C-14 sample was collected from a large burned roof beam approximately 10 cm in diameter at 130 cm below ground surface, just above the structure's floor (see Section 6.2.1.2).

Test Pit B was placed in the northwest corner of a cobble lined structure designated Provenience B. The 1 m² pit was excavated in six levels to a depth of 80 cm below ground surface (Figure 6.4). Soil consisted of a loamy silt with occasional pea sized gravel and charcoal fleck inclusions. A probable and two definite floors were encountered. The uppermost floor was an eroded and discontinuous adobe surface located approximately 40cm below ground surface. A second, more intact, prepared adobe surface was encountered at approximately 68cm below ground surface; it lipped upwards towards the room corner. A third 3-4cm thick adobe surface was encountered at approximately 78cm below ground surface; it overlay sterile gravel deposits.

Test Pit I was a 1 m² unit placed in the northwest quadrant of a pithouse, Provenience I. The pit was excavated in 13 levels to a depth of 130cm below ground surface (Figure 6.5). Fill within the pit consists of a compacted dark loamy clay with occasional gravel inclusions. At approximately 90cm below ground surface, soils turned somewhat ashy and more loamy in texture. Near the bottom of the excavation, some adobe slump was encountered. A continuous, darkly stained, prepared 2-3cm thick adobe floor surface was encountered at approximately 127cm below ground surface. Subfloor testing in one quadrant revealed sterile gravel substrate.

6.2.1.1 Excavated Lithic Artifacts

The excavated lithic assemblage from test pits A, B, and I included 195 pieces of debitage. Test Pit A yielded, in addition to 151 pieces of debitage, three bifaces, two cores, and one scraper. Test Pit B yielded two cores, while Test Pit I produced a single core. Intra-assemblage similarities permit the discussion of all excavated artifacts as one collec-

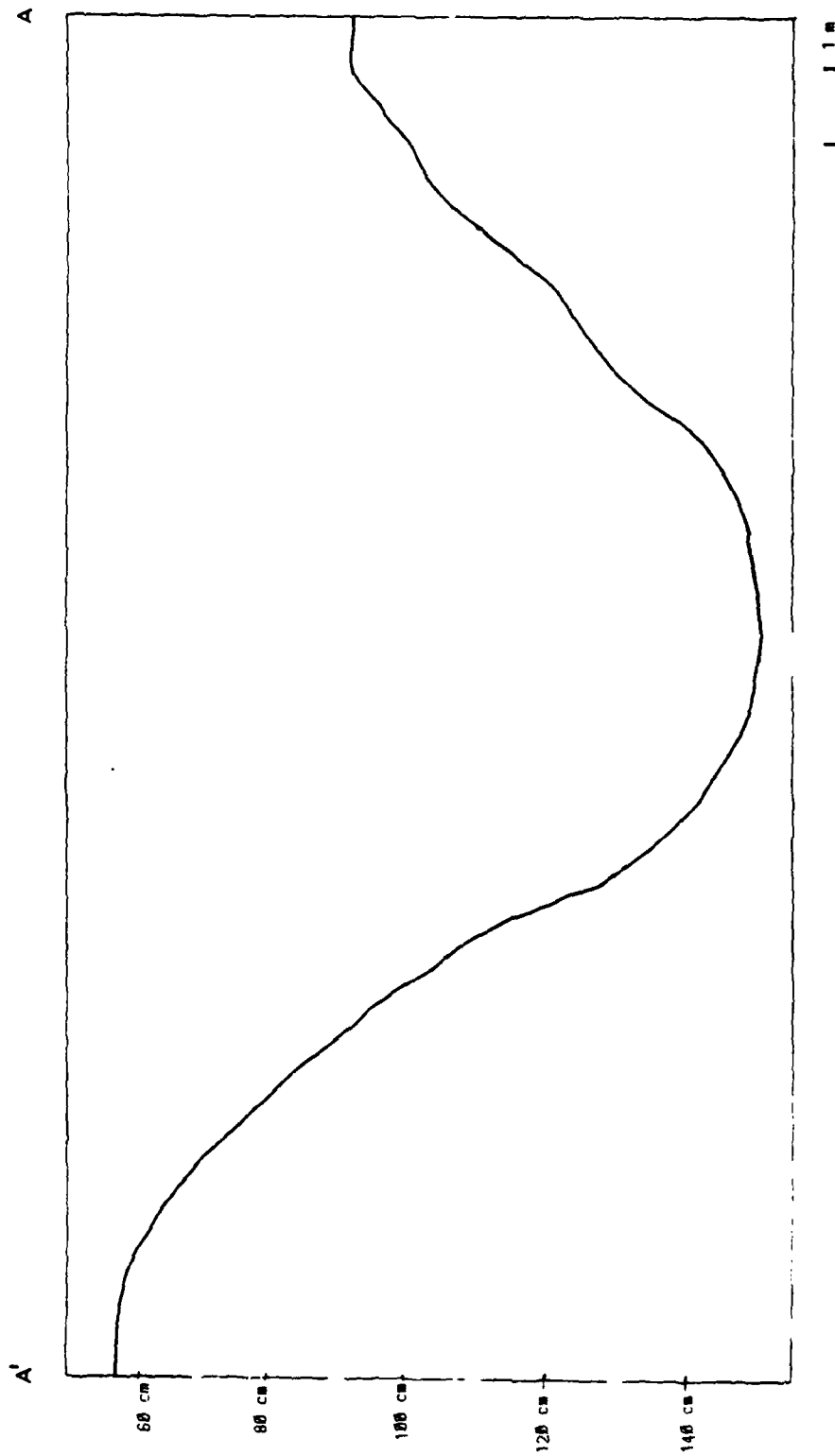


Figure 6.1 East to West Profile of Great Kiva Depression at LA 50548.

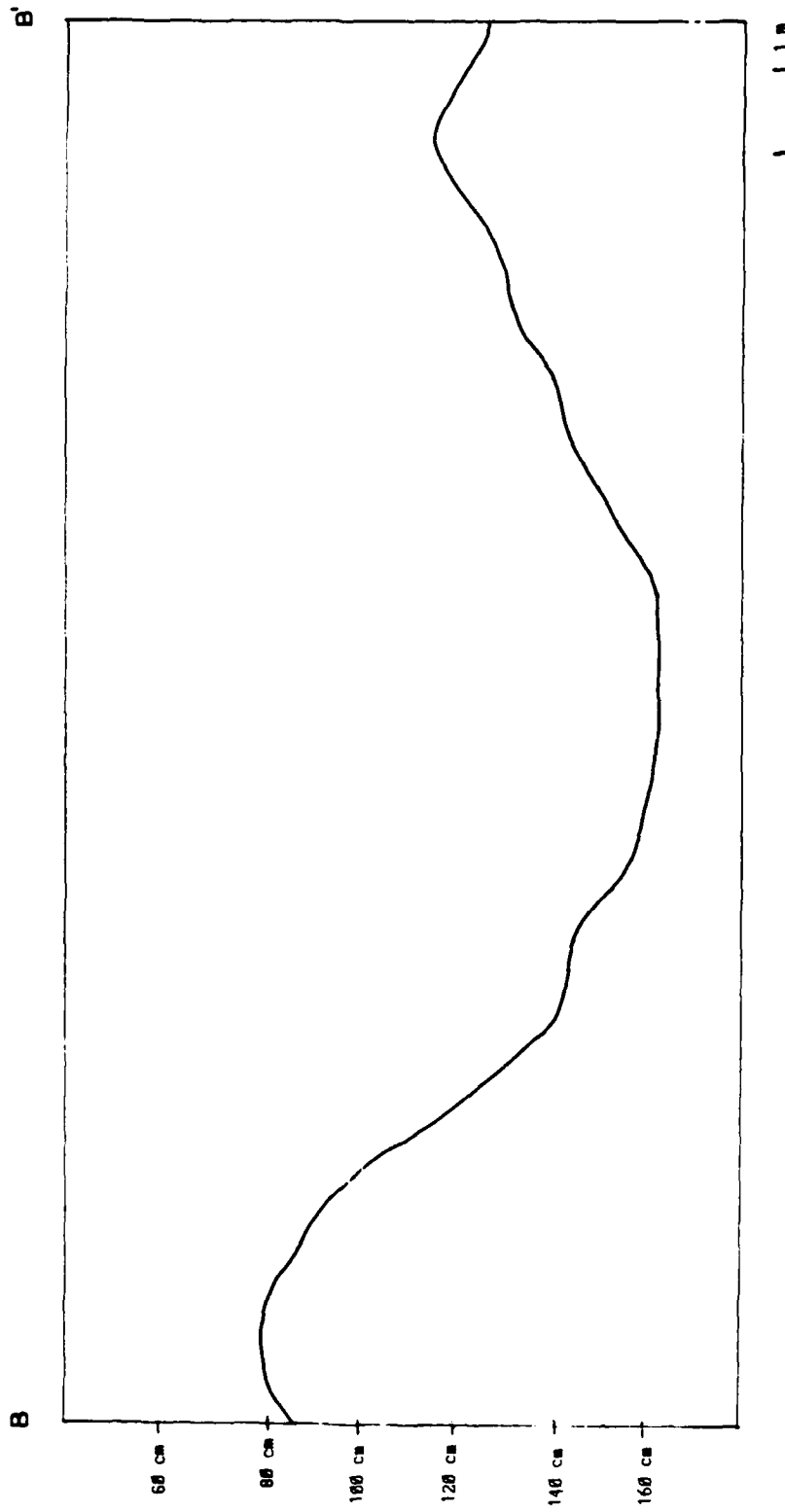


Figure 6.2 South to North Profile of Great Kiva Depression of LA 50548.

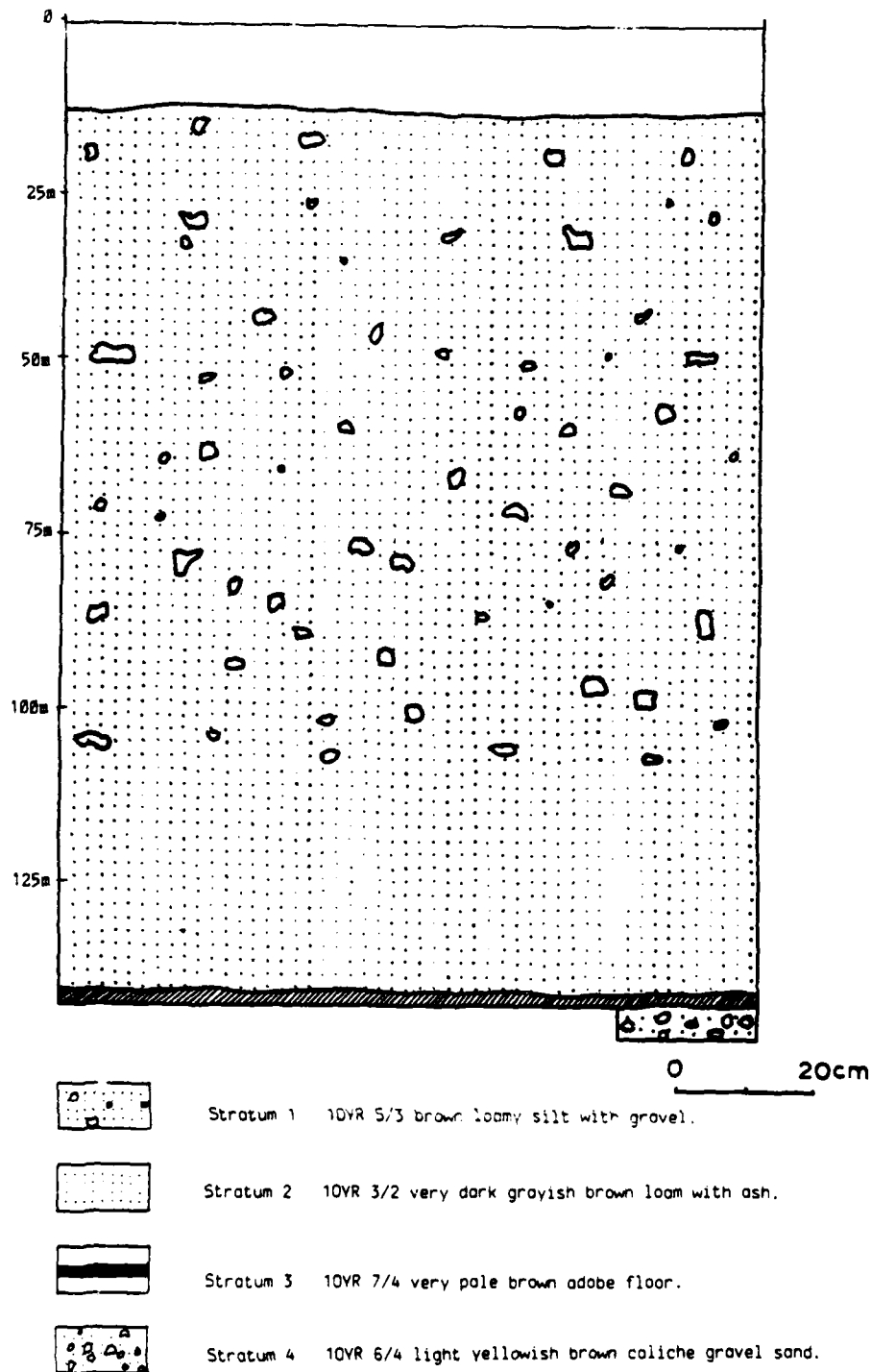
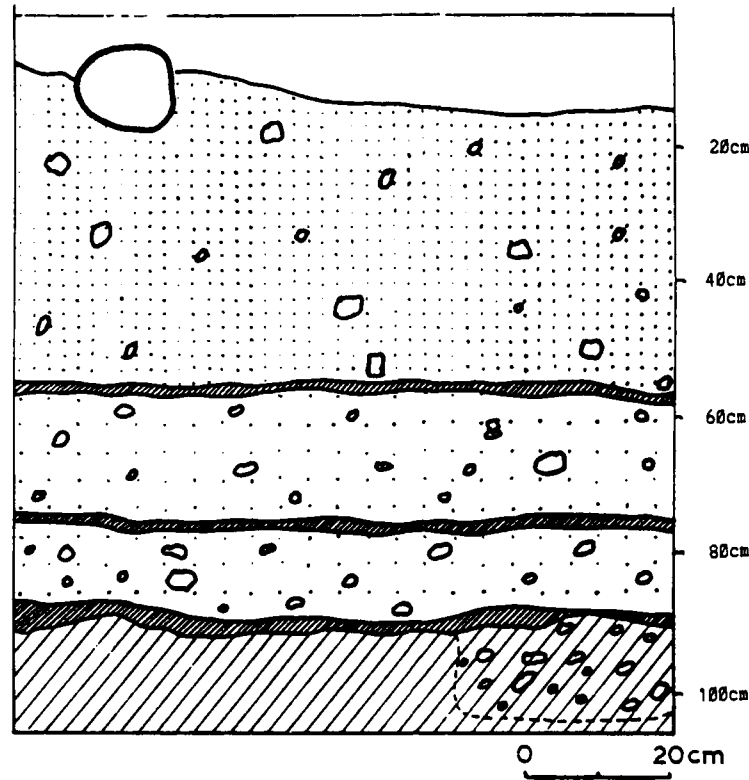


Figure 6.3 Profile of the South Wall of Test Pit A at LA 50548.



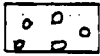
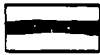
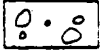
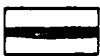
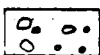
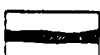
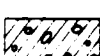
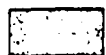
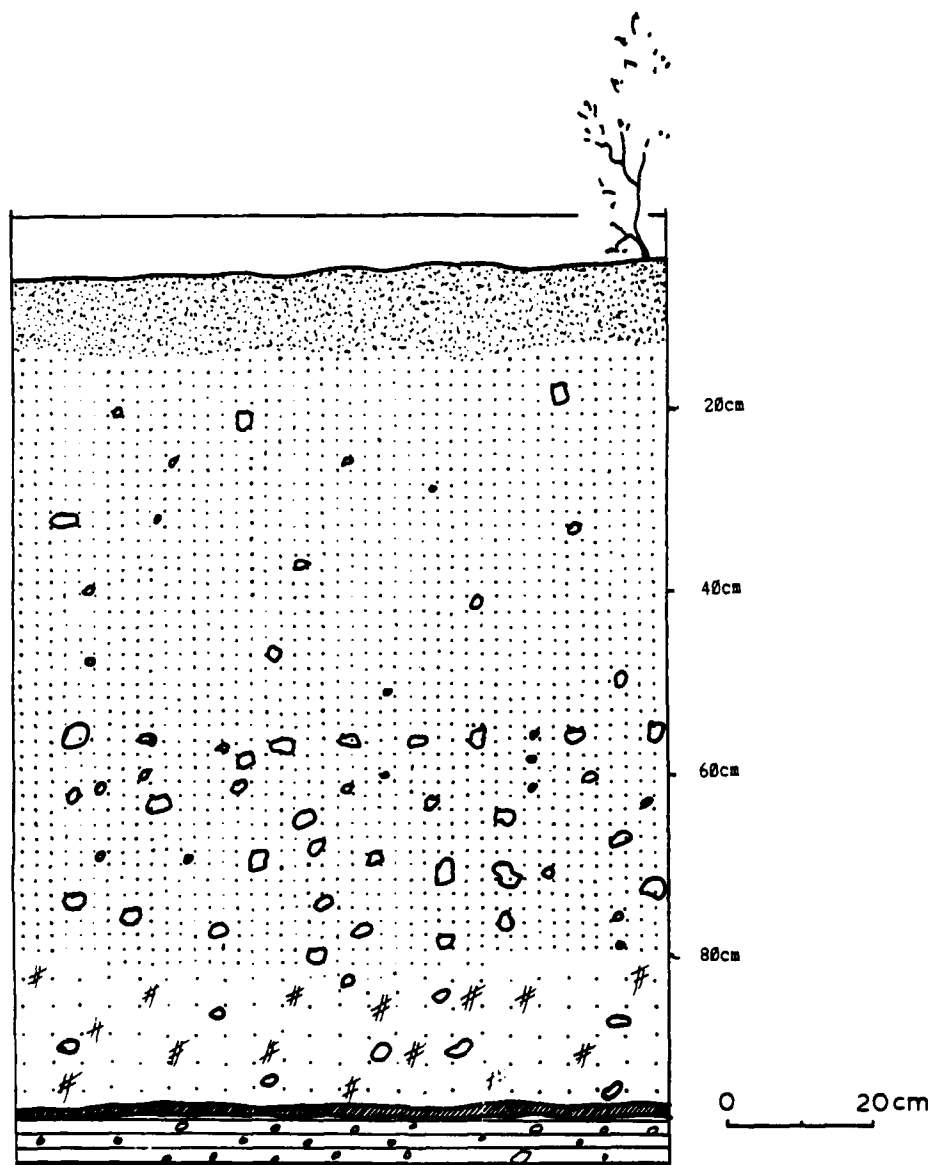
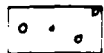
- | | |
|---|---|
|  | Stratum 1 10YR 5/2 grayish brown loamy silt with gravel. |
|  | Stratum 2 Discontinuous 10YR 7/3 very pale brown prepared adobe. |
|  | Stratum 3 Same as Stratum 1. |
|  | Stratum 4 Somewhat discontinuous 10YR 7/3 very pale brown prepared adobe surface. |
|  | Stratum 5 10YR 5/2 grayish brown loamy sand with gravel. |
|  | Stratum 6 Continuous 10YR 7/3 very pale brown prepared adobe floor. |
|  | Stratum 7 10YR 5/4 yellowish brown caliche gravel sand. |

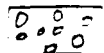
Figure 6.4 Profile of the East Wall of Test Pit B at LA 50548.



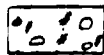
Stratum 1 10YR 5/2 grayish brown loamy silt.



Stratum 2 10YR 5/2 grayish brown loamy clay with pebble inclusions.



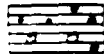
Stratum 3 10YR 5/2 grayish brown loamy clay with pebble and small cobble inclusions.



Stratum 4 10YR 5/2 grayish brown ashy loam with adobe chunk inclusions.



Stratum 5 10YR 5/2 grayish brown prepared adobe floor.



Stratum 6 10YR 5/4 yellowish brown caliche gravel sand.

Figure 6.5 Profile of the North Wall of Test Pit I at LA 50548.

tion. Collected debitage mostly exhibited no dorsal cortex (62%), while the remaining 75 specimens (38%) displayed evenly distributed cortex totals between 1%-100%. Nearly half of the total collected debitage assemblage (49%) consisted of core flakes while the next largest group of materials (27%) represented angular debris. Forty percent of all debitage exhibited edge damage which could possibly be attributed to use attrition. Flake thicknesses were mostly less than six millimeters (60%). Grey chert dominated material types (21%), followed closely by banded chert (15%). Variability is reflected in the remainder of the assemblage with a considerable number of locally available materials represented.

Formal artifacts from Test Pit A included three bifaces (chalcedony, obsidian, chert), one chert scraper, one grey chert core, and one rhyolite core. Test Pit B yielded two cores (mottled chert, tan chert) and Test Pit I produced one core of grey/brown quartzite.

Overall assemblage composition did not vary greatly along any variable monitored either among excavated proveniences or between surface and subsurface deposits. Some generalizations, however, can be offered. No biface flakes or blades were noted on the surface; blades were present in the pithouse and Great Kiva and biface flakes were present in Great Kiva fill. Bipolar debitage was absent on the surface but was present within the Great Kiva. Flake to angular debris ratios did not vary significantly among excavated proveniences or between surface and subsurface assemblages.

Utilization percentages were much higher in excavated contexts; this probably resulted from better observational facility in a laboratory situation. Finally, flakes tended to be much thicker in surface assemblages than in excavated assemblages. This could reflect several possibilities. It may be that thin or small flakes were not nearly so visible on the surface and were therefore not monitored. Alternatively, it is possible that taphonomic processes result in subsidence of tiny flakes on terrace surfaces. The use of 1/4 inch hardware cloth also selects for recovery of small flakes.

6.2.1.2 Excavated Ceramic Artifacts

LA 50548 produced 15 types and a total of 296 sherds from three different test pits. Types represented are Mimbres whiteware, San Francisco Red, indeterminate redware, indeterminate red-on-brown, plain grayware, and plain, smudged/polished, unsmudged/well polished, scored clapboard corrugated, flattened clapboard corrugated, smudged/flattened clapboard corrugated, incised, obliterated corrugated, and indeterminate textured brownwares. Likeliest ceramic assemblages represented at the site are types C (750-1000) or D (1000-1150). A C-14 sample from Test Pit A produced a date of A.D. 1180 +/- 60 (University of Texas-Austin Radiocarbon Laboratory No. 5451), supporting an Assemblage D assignment. This sample dates rooffall. The lack of paint and small sherd size of the Mimbres whitewares make classification into Boldface, Transitional, or Classic types difficult. The variety of textured ware and low frequency of corrugated wares support a group C (Boldface B/W) designation. Test Pit A produced the majority of the sherds. Only 17 sherds and four types were found in Test Pit B. Test Pit I produced a total of 59 sherds, all but four of

which were plainwares. Unlike Test Pit A, tests B and I contained no Mimbres or other whitewares, only redwares.

Although sample sizes from surface collections are too small to compare statistically with the excavated ceramics the types represented are generally similar. Noticeable differences involve the much greater proportion of plainwares in the excavated collection. Test excavations in LA 53483, LA 50547, and LA 50548 produced generally similar painted ware assemblages. The first two sites differed from LA 50548 in that smudged/polished sherds were more common than plain and unsmudged/well polished sherds; the differences may be due to the small sample size, however. Although two ceramic analysis were involved, (Enloe analyzed the surface monitored ceramics; Earls analyzed the excavated ceramics and the Mitchell collection), they were trained by the same individual, (Jack Bertram) and used the same definitions and criteria for types. Analyst differences did not contribute significantly to assemblage differences.

6.2.1.3 Excavated Archaeofaunal Material

Archaeofaunal materials were recovered from three tested proveniences at LA 50548.

Test Pit A yielded a small or medium mammal shaft fragment, a Lepus sp. right fourth proximal metatarsal and a right Lepus sp. tibia shaft fragment. All were severely leached and root-etched.

Test Pit B yielded a small or medium mammal fragment, a Lepus sp. femur shaft fragment of indeterminate laterality, and two shaft fragments of a (probable) single Lepus right radius. All specimens are leached and root-etched.

Test Pit I produced: one medial and one lateral proximal shaft from (probably) a single Artiodactyl left radius, two large mammal shaft fragments; a shaft fragment from a Lepus sp. which was burned in a reducing atmosphere until blackened and slightly charred, a small or medium mammal shaft fragment, two Lepus sp. left radius shaft fragments, and a single piece of Lepus sp. distal humerus of indeterminate laterality evidencing roasting. All faunal materials are leached and root-etched.

The evidence of leaching and root etching on faunal materials reflects site placement on gravel terraces with poorly sealed floors. The leaching indicates rapid groundwater movement. The root etching reflects either slow deposition so that materials remained near the surface or the presence of a semi-impermeable surface that halted downward root movement, causing roots to spread laterally.

6.2.2 MA 235F-6/LA 53483

Two 1 m² test pits were excavated at LA 53483.

Test Pit A was placed in the southwest corner of a probable three room block designated Provenience A. The pit was excavated in three levels to a depth of 28 cm below ground surface (Figure 6.6). Fill consisted of a

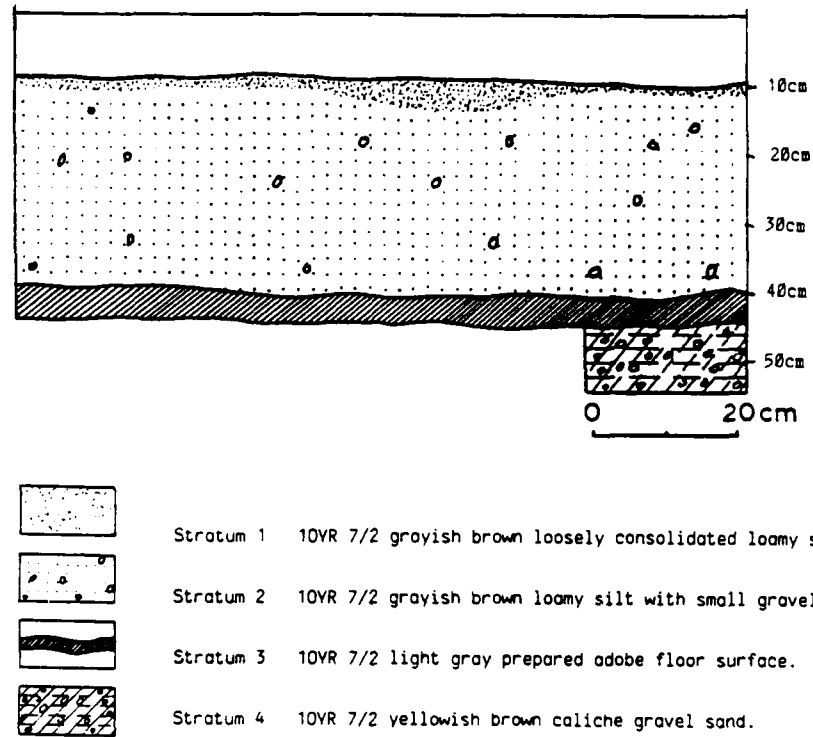


Figure 6.6 Profile of the West Wall of test Pit A at LA 53483.

loamy silt with occasional gravel and charcoal fleck inclusions. A continuous, hard-packed adobe floor, 2-3cm in thickness, was encountered at 28cm below ground surface. Subfloor testing in one quadrant revealed sterile gravel substrate.

Test Pit D was placed in a slight depression devoid of gravel. This area, designated Provenience D, was suspected to be a pithouse. The pit was excavated in five levels to a depth of 50 cm below ground surface (Figure 6.7). Fill consisted of pea-sized gravels in a silty matrix. As depth in the level increased, so did the amount of caliche. It was concluded that deposits were sterile. Although Provenience D is probably not a pithouse, it is almost certainly a cultural feature, the function of which is not known.

6.2.2.1 Excavated Lithic Artifacts

Test Pit A produced no lithics; Test Pit D (1x1 m) yielded four pieces of debitage but no tools. Three of the four flakes collected exhibited edge attrition which could possibly be the result of use.

6.2.2.2 Excavated Ceramic Artifacts

Three types were present in LA 53483: a Mimbres whiteware, San Francisco Red, and a smudged/polished brownware. Since only four sherds were found, an assemblage group cannot be assigned. Possible dates, based on Lekson's (1984) summary of a ceramic assemblage classification by Barbara Mills, may range from A.D. 200 to 1275.

6.2.3 MA 235F-7/LA 50547

Two 1 m² test pits were excavated at LA 50547.

Test Pit A was placed in the NE corner of a cobble-lined, one-room structure designated Provenience A. The pit was excavated in five levels to a depth of 50 cm below ground surface (Figure 6.8). Fill consisted of a loosely compacted loamy silt with occasional gravel inclusions. At the bottom of level four, dense terrace gravels with calcium carbonate inclusions were encountered and the pit was terminated. No prepared adobe surface was encountered; presumably, it was once present at approximately 40cm below ground surface.

Test Pit B was placed several meters east of Test Pit A in what was probably an extramural activity area. The test pit was excavated in three levels to a depth of approximately 30cm below ground surface (Figure 6.9). Fill consisted of a fine loamy sand with numerous gravel inclusions. Sparse cultural inclusions were present throughout the first 25 cm.

6.2.3.1 Excavated Lithic Artifacts

Excavated artifacts recovered from Test Pit A and B at this locale included 84 pieces of debitage and two cores. Because of homogeneous traits between the assemblages from both pits, all subsurface materials will be discussed together.

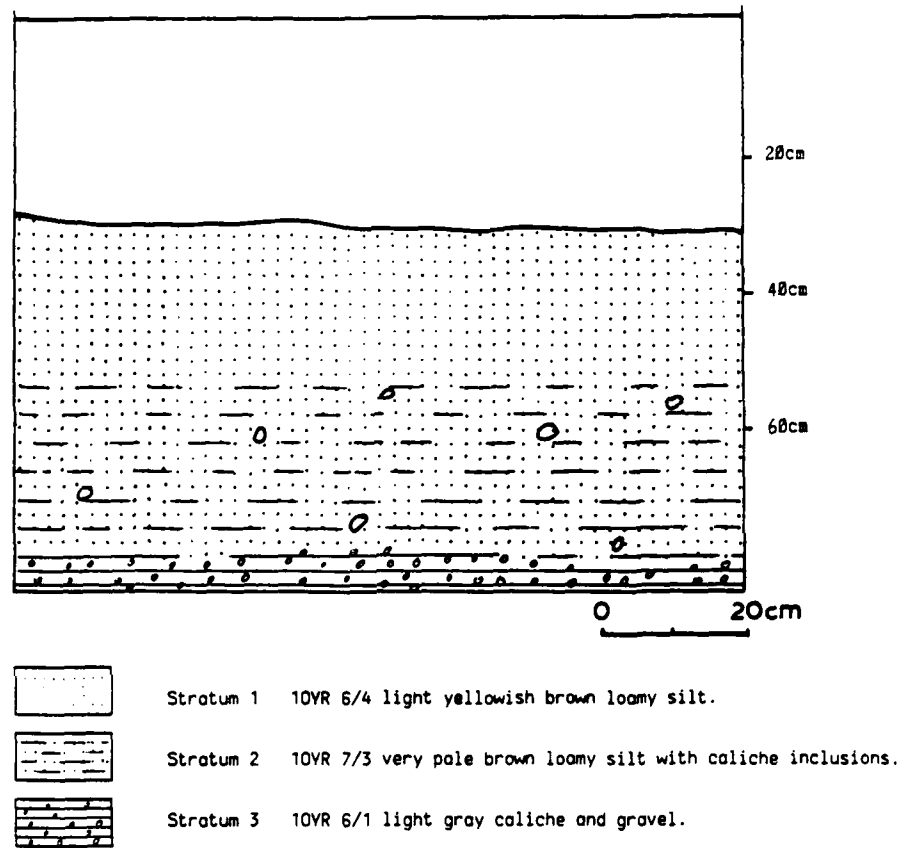


Figure 6.7 Profile of the East Wall of Test Pit D at LA 53483.

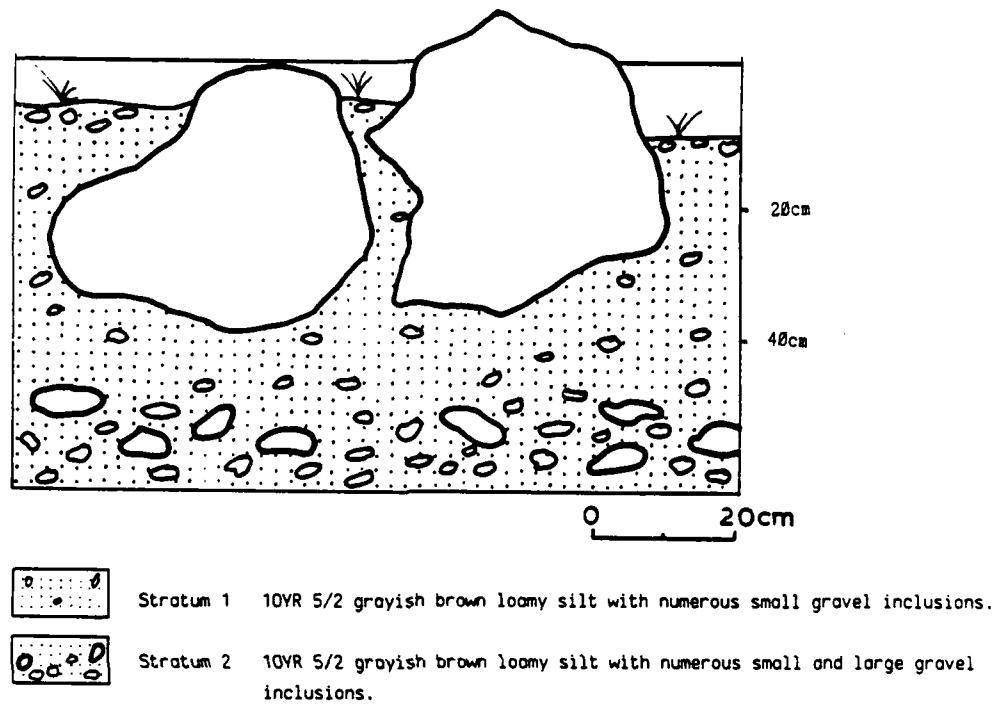


Figure 6.8 Profile of the North Wall of Test Pit A at LA 50547.

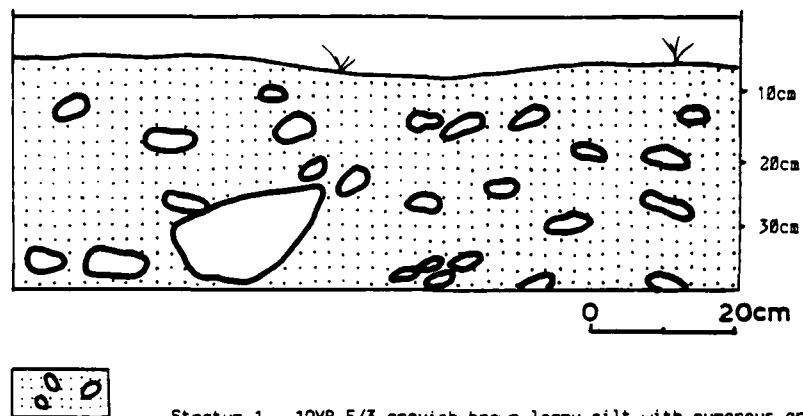


Figure 6.9 Profile of the North Wall of Test Pit B at LA 50547.

Debitage predominantly exhibited no dorsal cortex (50%) with the remainder displaying 1%-30% (21%); 31%-70% (19%); and 71% or more (9%). Core flakes accounted for 62% of alldebitage with angular debris accounting for 20%. Approximately 30% of thedebitage exhibited some edge damage which could be attributed to human modification (use). The remainder displayed no use damage. Thicknesses are fairly evenly distributed across a range of from one to 12 millimeters, although some clustering can be seen between four and 12 millimeters (68%). Banded chert was best represented (39%), followed by grey chert (21%). A wide variety of locally available materials make up the remainder of the rock types.

Two cores are included in the excavated assemblage (banded chert, rhyolite). One of the cores exhibited use attrition.

6.2.3.2 Excavated Ceramic Artifacts

Excavation at LA 50547 produced seven ceramic types. These were Mimbres whiteware, Chupadero Black-on-White, indeterminate whiteware, buffware/whiteware, San Francisco Red, plain brownware, and a smudged/polished brownware. Only 12 sherds were found, so assemblage assignation is problematic. Probable dates are 750 to 1225.

6.2.4 MA 235F-8/LA 50550

A series of eight auger tests were excavated over the entire site area at LA 50550. This site was bulldozed and the purpose of the tests was to determine whether or not the site retained any intact cultural deposits. The depths of the auger tests ranged in between 10 and 150cm. Soils encountered were sands with a high gravel content. At approximately 35cm below ground surface, a single piece of charcoal was the only evidence for subsurface deposits encountered.

6.2.5 MA 235F-12/LA 53486

Two 50 cm x 2 m test pits were excavated at LA 53486. Pit location was problematic in that lithics and ceramics have been heavily collected by a resident over the past few years; as a result, artifact density could not be used as a criteria for test pit location.

Test Pit A was placed along a possible structural alignment (Figure 6.10). It was excavated in two levels to a depth of 30 cm. Fill consisted of terrace gravels in a loamy sand matrix. As no cultural materials were encountered, excavation was terminated.

Test Pit B was placed over a large basin metate (Figure 6.11). The intent was to determine the depth of cultural deposition, if present, in an apparent processing area. The pit was excavated in two levels to a depth of approximately 16 cm below ground surface. No cultural material was encountered in the terrace fill and excavation was terminated.

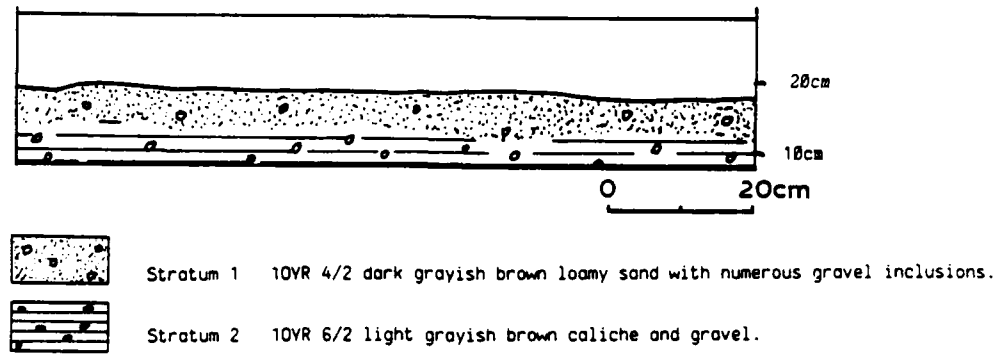


Figure 6.10 Profile of the West Wall of Test Pit A at LA 53486.

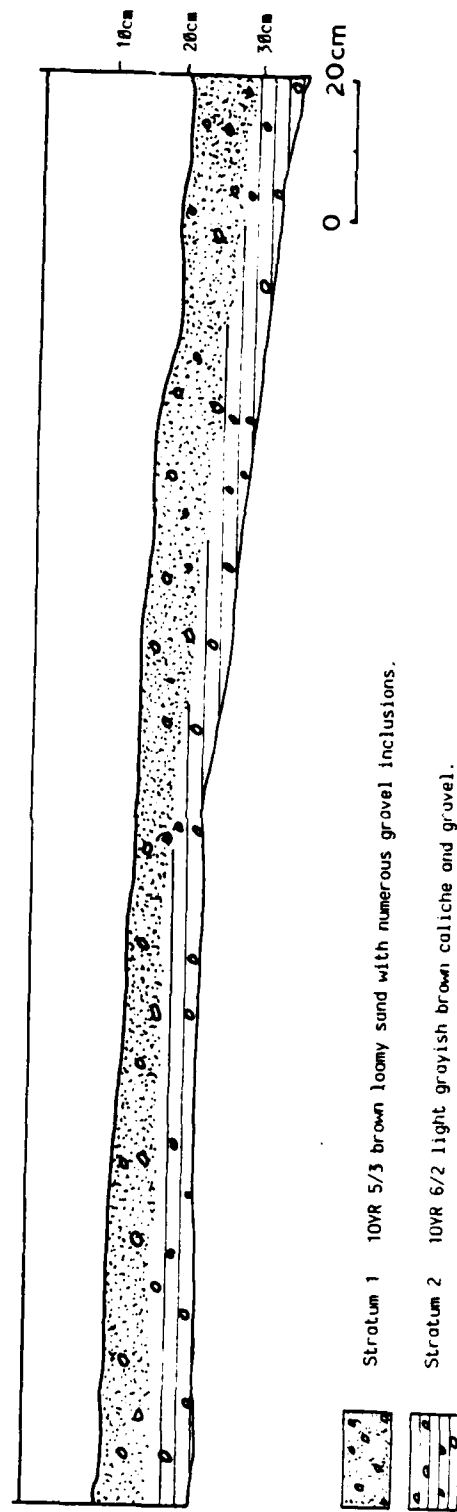


Figure 6.11 Profile of the North Wall of Test Pit B at LA 53486.

6.2.6 MA 235F-14/LA 53488

LA 53488 was a lithic scatter which, an informant claims, might have a buried structural component. A total of three test pits was excavated to evaluate that possibility.

Test Pit A was a 1 m² pit placed over a burned area associated with fire-cracked rock. It was determined that the hearth was largely surficial and probably recent. Excavation was terminated 4 cm below ground surface.

Test Pit B was a 50 cm x 2 m test pit excavated in colluvial and aeolian sand deposits from which artifacts appeared to be eroding. The pit was excavated in two natural levels to a maximum depth of 55 cm below ground surface (Figure 6.12). Stratum 1 consists of unconsolidated blowsand. Stratum 2 consists of a 38 cm thick charcoal-stained sand with occasional gravel inclusions. Cultural materials were recovered from the upper 4-5 cm only. Underlying the stained soil horizon was an unstained blow-sand designated Stratum 2, which was devoid of cultural content. It was concluded that soil staining resulted either from undetected pre-historic cultural features or from burning mesquite to clear agricultural fields.

Test Pit C was a 1 m² pit placed in colluvial deposits, once again, in search of subsurface architectural features. The pit was excavated in three natural levels to a depth of 40 cm below ground surface (Figure 6.13). Four stratigraphic units were encountered. Stratum 1 consisted of a fine 5 cm thick loamy silt. Stratum 2 consisted of a wind-blown silt and sand which ranged in thickness from between three and 11 cm. Stratum 3 consisted of a 30 cm dark, charcoal-stained colluvial loamy sand, with pea-sized gravel inclusions. Stratum 4 consisted of an aeolian sand with pea-sized gravel inclusions and occasional flecks of gravel. No cultural material was recovered from the test pit. Interpretation of charcoal staining is largely problematic.

6.2.6.1 Excavated Lithic Artifacts

Of the three test units excavated at this locale, only one yielded lithic artifacts. Test unit B contained six pieces of debitage and two cores. Half of the debitage exhibited no cortex. Four of the pieces were core flakes while two were determined to be angular debris. Three pieces of debitage exhibited one or more damaged edges; presumably, the result of use. Three of four whole flakes were between seven and 12 millimeters in thickness. Banded chert is the most common material type present.

Two cores (mottled chert, tan chert) were recovered during the excavation. Both exhibited evidence of use attrition.

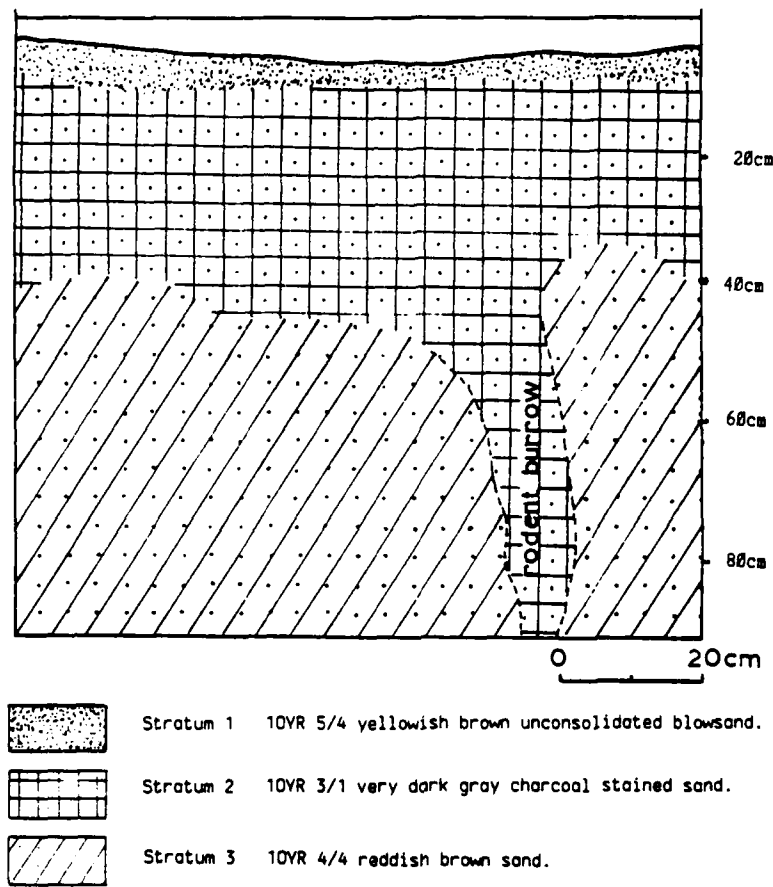


Figure 6.12 Profile of the East Wall of Test Pit B at LA 53488.

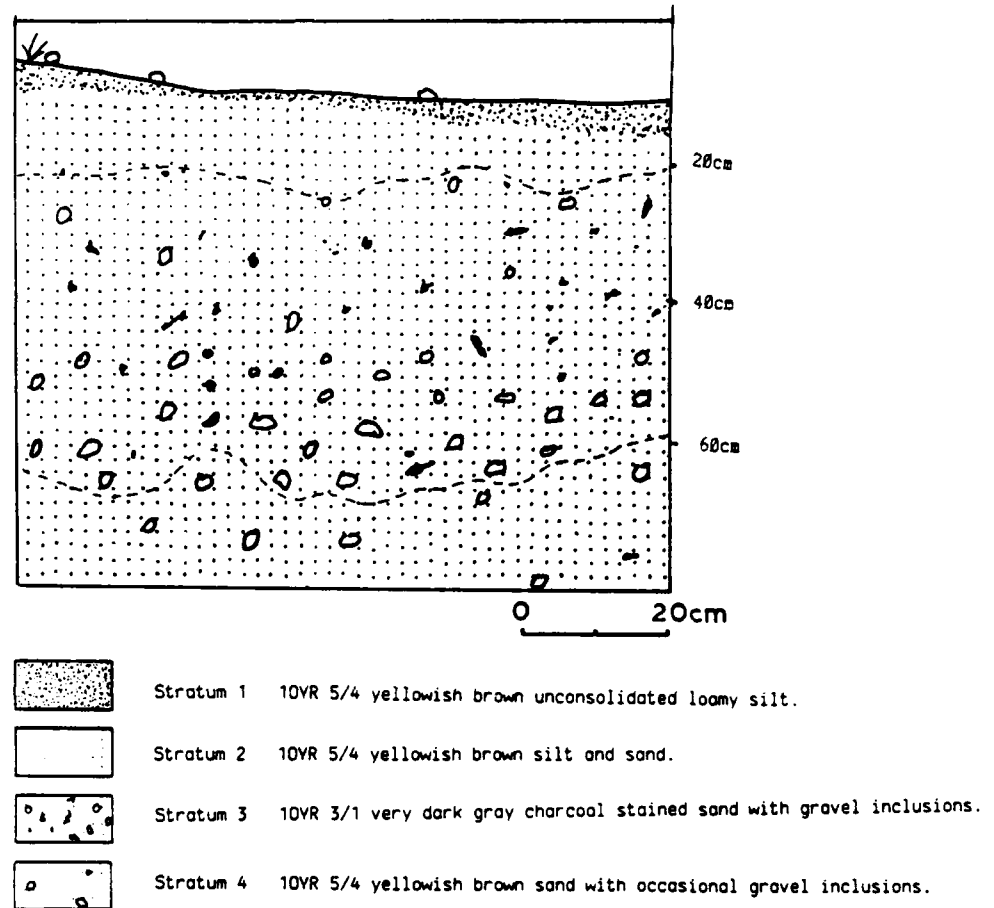


Figure 6.13 Profile of the West Wall of Test Pit C at LA 53488.

6.3 TESTING SUMMARY: DEPOSITIONAL

6.3.1 Depositional Summary

The testing phase of the Cuchillo project was extremely brief and clearly inadequate for defining maximum depositional parameters at tested sites. Nevertheless, certain tentative observations can be offered.

1. Tested artifact scatters appear to lack extensive subsurface deposits. It should be emphasized, however, that only two scatter sites (LA 53486 and 53488) were tested with five test pits.
2. With the exception of LA 50550, the bulldozed site, significant cultural deposition is in evidence at all tested Mogollon structural sites. Tested cobble-lined structures proved to be semi-subterranean. Depth of interior cultural deposits ranged between 28 and 80cm. Minimum estimates of anticipated volume of interior cultural fill per structure range between $7.0m^3$ and $26.4m^3$.

Cultural deposits at the two pit structures tested at LA 50548 were, at minimum, 127 and 130cm in depth. Anticipated volume of cultural deposits at the great kiva is on the order of $200m^3$. Anticipated volume of cultural deposits at the pit structure is at least $15.6m^3$.

Extramural cultural deposition can also be anticipated. The single extramural test pit excavated at LA 50547 yielded 25cm of cultural deposition.

In all cases, the limited extent of testing did not permit estimation of the frequency of intramural or extramural features (cists, cache pits, bottle-shaped pits, burials), all of which may be anticipated at these sites and all of which would result in increased volumes of cultural fill.

6.3.2 Summary of Excavated Lithic Artifacts

The excavated lithic artifact assemblage totaled 300 items. Eleven tools, seven cores, and 289 pieces of debitage comprised the total. Tools included three bifaces and one scraper. Chert was the dominant material type (75%) looking at all tools and debitage. Quartzite was next best represented (9%), followed by rhyolite (4%) and chalcedony (4%). Obsidian was relatively well represented, particularly at LA 50548, Test Pit A (5%). A variety of local materials accounted for the remainder of rock types represented in the assemblage.

Regarding debitage (all four excavated sites), most specimens (57%) retain no dorsal cortex, while 18% exhibit less than 30%. Most specimens appear to be core flakes that are moderately thick (four to 12 millimeters). A considerable number of flakes exhibited edge damage, presumably due to use attrition (37%). The site exhibiting the most flake blades was LA 50548, Test Pits I and A (six specimens each). It should be noted that Test Pit A was excavated inside of a suspected pithouse depression. Use damaged flakes were also concentrated in Test Pits A and I at LA 50548. Sixty-four percent of all flakes (36) excavated from Test Pit

I exhibited at least one culturally modified edge. Test Pit A yielded 23 edge damaged flakes, or 34% of the total collected sample.

Excavated chert cores appear to relate to debitage recovered from LA 50547, LA 50548 and perhaps within LA 53488. Of particular note is Test Pit A at LA 50548 where grey chert dominates the debitage assemblage and a grey chert core was recovered in the same unit. Excavated artifacts appear to have been washed into the Kiva and thrown in as trash as the hole was filled; only artifacts in or on possible intact roofwall are thought to have been in primary depositional context. The artifacts appear homogeneous in form and function.

6.3.3 Summary of Ceramic Artifacts

Subsurface ceramics were recovered from three sites and totalled 313 items, all of which were analyzed. Only one site, LA 50548, yielded an assemblage of statistically meaningful size (296 items total); sites LA 53483 and LA 50547 yielded small samples (four items and 12 items, respectively). Although all assemblages from LA 50548 could be contemporary, it is possible that the pithouse (Test Pit I) predates the Great Kiva assemblage (Test Pit A), which may pertain to Early Mimbres. Site LA 53483 is essentially contemporary with LA 50548, based strictly on the types present. Site LA 50547 probably has an El Paso Phase component, superimposed over Mimbres components. All three sites may have earlier components as well.

The assemblage-based ceramic classification provides a time range during which particular types of ceramics were manufactured and used. Just because these types occur on sites in the project area does not mean that these sites were occupied throughout the time period. On the contrary, the small, dispersed nature of structures brings contemporaneity and duration of occupation into doubt (see section 9.0).

6.3.4 Summary of Excavated Archaeofauna

The condition of bone materials from LA 50548 suggests that many more bone materials may have been present originally in these deposits, but were lost due to taphonomic (especially leaching) processes. The paucity of burned bone, which preserves far better than unburned fragments, indicates an absence of bone disposal in hearths and perhaps an absence of roasting. Taxonomically, items recovered are restricted to jackrabbit limb elements and one artiodactyl, which could be mule deer, whitetail deer, pronghorn, or mountain sheep.

6.4 Summary of Chronometric Potential

Chronometric samples encountered in testing suggest that substantial chronometric potential is probably present in a number of sites. Use of survey and testing data to extrapolate chronometric sample recovery for other sites or contexts is possible only with reservations.

Testing was not designed to recover floor hearths; rather, test pits were installed along walls. The possibility of archaeomagnetic or radiocarbon dating for floor hearths is therefore only assumed.

Distinguishable roof fall was encountered only in pit structures. We assume, but cannot document, some potential for radiocarbon or dendrochronological dating of roof fall. Similarly, definite post-abandonment fill was not distinguishable, but room fill was commonly found to contain charcoal. We assume, but can document only partially, potential for trash fill radiocarbon dating. Obsidian and vitrophyre are present on several sites, but obsidian was only encountered in quantity in Test Pit A, LA 50548. Probably, some obsidian can be recovered from most prehistoric sites.

Extramural middens were not tested, nor were rockshelters. In-situ, intact hearths were not encountered on scatter sites, nor are they anticipated. Thermoluminescent dating is locally unevaluated. With these limitations in mind, we suggest that most sites do have or may have dating potential (Table 6.2). Pending detailed evaluation of site-taphonomic processes based on extensive local excavation, more exact assessments are probably not warranted.

Table 6.2 Chronometric Sample Potential for Prehistoric Sites, Cuchillo Assessment Study, ACOE, 1986

<u>Estimated Number of LocI with Sample Potential</u>					
Site	C-14 Dating	Archaeomagnetic Dating	Dendrochron- ological Dating	Obsidian Hydration Dating	Thermolumin- escent Dating
MA235F-1/LA53479	?	?	?	?	?
MA235F-2/LA50548	19	6	2	1	Yes
MA235F-3/LA53480	2	2	2	?	Yes
MA235F-5/LA53482	?	?	?	?	?
MA235F-6/LA53483	12	4	2	?	Yes
MA235F-8/LA50550	?	?	?	?	Yes
MA235F-9/LA50547	Yes	Yes	?	?	Yes
MA235F-11/LA53485	?	?	?	?	?
MA235F-12/LA53486	?	?	?	?	Yes
MA235F-14/LA53488	Yes	?	?	?	Yes
MA235F-15/LA53489	?	?	?	?	Yes
MA235F-16/LA53490	6	2	1	?	Yes
MA235F-20/LA53494	?	?	?	?	?

7.0 ANCILLARY ARCHAEOLOGICAL STUDIES

7.1 ARCHAEOLOGICAL INTERVIEW

One long-term resident of the Cuchillo Valley took a great interest in the Cuchillo assessment study. She has been a student of the prehistory, history, and natural history of the valley for a good portion of her life. Interviews with Nalda (Mrs. Billy) Lockney Mitchell were a valuable on-going component of the project. Ms. Mitchell's detailed knowledge of local archaeology, recent land use, and depositional history of the study area proved to be an invaluable and inexhaustible resource. She aided in site location, site evaluation and interpretation, and especially in the solution of problems relating to deposition and site visibility. Born on the Ladder Ranch approximately 20 miles south of the project area, Mrs. Mitchell lived several of her first 23 years in the project area at a habitation recorded as LA 53484. She returned to the valley nine years ago to retire. The Lockney home was constructed in 1939 over the foundations of a "Butterfield" stage stop and was occupied until the mid-1940s. The original stage structures were dismantled and removed to Cuchillo in the late 1930s. Cuchillo lay directly on the stage and wagon routes between the railroad siding at Engle and the mining towns of the Black Range. In 1888 Ed Fest of Cuchillo owned the stage line in addition to a ferry across the Rio Grande to Engle; he was also the town's only merchant (Wilson 1985:57). The actual Butterfield line ran through El Paso and southern New Mexico (Camilli and Allen 1979:171), with a branch line up the Rio Grande to Santa Fe; local tradition seems to have labelled local stage stops "Butterfield stops." The Lockneys raised Angora goats and farmed the Cuchillo floodplain. Crops included milo, maize, and garden vegetables. The house and barn were burned before the Lockneys left; they were never rebuilt.

At LA 53487, an historical habitation, Ms. Mitchell made an on-site visit. She knew the residents as a child and was able to assign function to several problematic proveniences. This information was incorporated into the site description presented in Section 5.1.13.

Ms. Mitchell also provided information on LA 50549, originally recorded as a tent base. The rectangular cobble alignment was constructed by Ms. Mitchell as a child. The remains are surprisingly similar to cimiento structural remains discussed in Section 9.0.

Perhaps the most important information Ms. Mitchell provided relates to recent alluviation and the presence of undetected and/or buried archaeological sites in the Cuchillo bottomlands. According to Ms. Mitchell, as many as 13 structural Mogollon sites, some with several rooms and/or pithouses, were visible in valley bottoms within the project area when she was a child. Most of these were still visible eight years ago. Ms. Mitchell claims to have collected "gallons" of pottery from these sites as a child; one of her brothers, she reports, was fatally snake-bitten while collecting a now buried site. We have no reason to doubt Ms. Mitchell's contention. Her information on site locations and historical events

throughout the survey was consistently accurate. In addition, she was able to show us two artifact scatters in the bottomlands that we failed to locate during survey. She claims that both scatters have buried architectural components. Although one scatter was tested and revealed no structural evidence, level of effort expended was clearly inadequate to rule out subsurface architecture. Two important factors make Ms. Mitchell's contention that buried sites are present believable. These include drastic changes in the vegetative structure in the last 40 years and rates of very recent alluvial deposition. Forty years ago, the Cuchillo bottom lands were under cultivation. Ms. Mitchell's father cut mesquite below ground surface to keep cultivated areas clear of vegetation. Put another way, when Ms. Mitchell was an adolescent, it was possible to inspect the ground surface (Figure 7.1). Today, the alluvial bottoms are covered by extremely dense and continuous thickets of burrobrush and mesquite (Figure 7.2). Another factor influencing site invisibility is the increased rate of alluvial deposition within the last 20 years. According to Ms. Mitchell, recent alluviation has been extremely severe. Major floods in 1968 or 1969 and in 1975 resulted in a tremendous discharge of water in the Cuchillo; one flood reportedly resulted in several drownings. In some instances, rapid sedimentation was visible archaeologically. Surveyors observed half buried cars manufactured in the late 1940s. In one instance, a recently constructed fenceline was almost completely buried.

Clearly, buried sites are a tremendous problem in archaeology. Several lines of evidence suggest that this problem is particularly severe in the Cuchillo project area. Interview data suggest that numerous buried Mogollon structural sites are present in the bottomlands within the project area; several of these sites may be sizeable. Preliminary studies presented here suggest that informant data may potentially be used as a method for locating buried or obscured sites. Informant identification of presently invisible sites combined with extensive trenching, could potentially provide a wealth of data on important and significant cultural resources.

Ms. Mitchell has been an avid artifact collector since childhood. Unlike many collectors, since her return to the Cuchillo Valley she has provenienced her collections by site. Analysis of Ms. Mitchell's collection not only complements in-field monitored and excavated samples, it also permits an evaluation of the reliability of surface monitored assemblages as chronological indicators.

7.1.1 Surface Ceramics - the Mitchell Collection

Ceramic items had been collected by Ms. Mitchell from five sites recorded by the present study. Comparison of her collections (Appendix D.3) with on-site surface ceramic observations made during the present study (Appendix D.1) revealed several significant factors. Not all collectors, it seems, concentrate on decorated wares. Ms. Mitchell's collection typically had two brownware sherds for each decorated sherd, while recordation in this survey had indicated an anomalously high decorated-to-plain ratio of nearly 1:1. In no case did Ms. Mitchell's collection agree in composition with observations made in this survey. While two different



Figure 7.1 The Cuchillo Valley in the 1940s.
Note cleared areas.

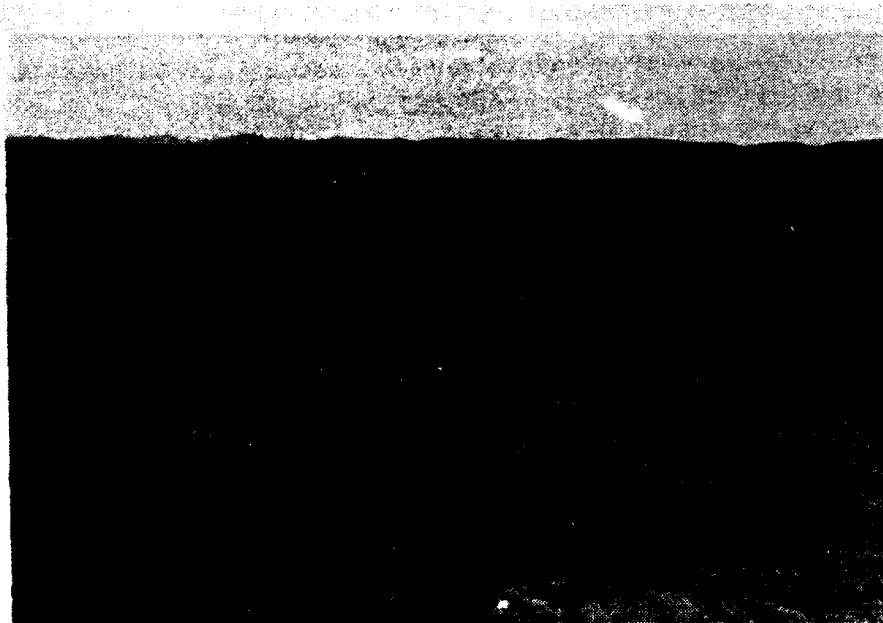


Figure 7.2 The Cuchillo Valley today.
Note dense vegetation.

analysts were involved, their classification of types were not significantly different.

On site LA 50548, we had recorded an assemblage of mixed early and late Mimbres B/W and clapboard brownware. Ms. Mitchell's collection contained exclusively Mimbres Classic B/W, later corrugated wares, and Chupadero B/W.

On site LA 50550, our observations indicated an assemblage ranging in age from Mimbres Boldface B/W through the El Paso/Chupadero types, and including affinis Magdalena B/W, with a brownware series no later than scored wares. Ms. Mitchell's collection indicated earlier (3 Circle R/W) occupation, northwestern (Tularosa B/W) affinities, and a different (clapboard corrugated) brownware series.

On site LA 53483, our internally consistent Mimbres Transitional assemblage was again unlike Ms. Mitchell's collection, which included Classic Mimbres B/W, contrasting Mogollon R/Br, and the full series of corrugated brownwares.

Site LA 53486, for which we had recorded one sherd, proved to have yielded Chupadero B/W, Mimbres Classic B/W, and a brownware assemblage with no corrugation.

The disparity between surface monitored and informant collected assemblages noted in this study is both fascinating and perplexing. Could it be that site proveniences were confused? Or does the disparity reflect the unreliability of surface assemblages as a basis for projecting assemblage composition in the Cuchillo vicinity? We suspect the latter. Interviews indicate that Ms. Mitchell's family has collected structural Mogollon sites in the project area for a generation. Collections made by Ms. Mitchell span only eight years of sporadic activity.

This phenomenon of present surface assemblages being very different from collections made in the 1930s and 1940s by Herbert Yeo and N.P. Mera, with the present assemblages having fewer types, has been documented on many sites along the Rio Grande. At LA 282, for example, the Laboratory of Anthropology 1930s collection suggested a primary early glaze occupation, while UNM Field School surface collection and test excavation reflected late glaze use of the site (Earls 1984).

The point is crystal clear; surface assemblages in the vicinity no longer reflect assemblage variability deposited. Excavated ceramic assemblages correlated with absolute dates are needed to resolve important problems relating to chronology, ceramic assemblage composition and site reoccupation.

8.0 HISTORICAL INTERVIEWS

8.1 INTRODUCTION

Present-day Cuchillo is a village of approximately 30 families and less than 100 residents living in both the village limits and in outlying areas upstream and downstream. Cuchillo is located some 10 miles northwest of Truth or Consequences (T or C). Many of its inhabitants have close ties with Truth or Consequences as a place of work and many maintain homes in both places. Half of the 18 present or former Cuchillo residents interviewed now live in T or C (Table 8.1). Other individuals own land either in the Palomas drainage to the south or downstream of Cuchillo. Still other kinship and landowning ties are maintained with the villages of Winston and Chloride upstream, the town of Monticello to the north, and the cities of Las Cruces and Silver City to the south. Few economic opportunities exist today in Cuchillo.

Perhaps half of the present day residents of Cuchillo are retired. A minority make a living locally, working on nearby ranches or at their own businesses, such as the local bar, the pecan orchard, or the business machinery shop. A state road improvement project has employed several local residents temporarily. The remainder commute to T or C to work. Many used to work on the Elephant Butte and Caballo dams or associated projects. Until recently, agriculture was still an important economic pursuit. However, few people recently have maintained cleared areas for crops or garden vegetables due to a lack of irrigation water.

The number of cattle brands displayed in the Cuchillo bar suggests ranching's previous importance in the Cuchillo area. Most are apparently family brands with only a few representing large outfits such as the Hawk or Ladder ranches. Most ranching today is confined either to the flats above the valley or to adjacent drainages. The town itself comprises some 50 houses with possibly half of those abandoned (they may still be used for storage or as a source of building materials, however). Another 15-20 houses and additional barns/sheds are located down the valley from the town proper in a dispersed settlement lying east of the road leading to the cemetery and upstream from the Cuchillo box.

8.2 METHODS

Two major objectives of the historical study were to document the Cuchillo cemetery and to interview local residents about their concerns relative to protecting the cemetery against impacts from the proposed dam and flood pool.

The cemetery documentation centered on recording its appearance at present and interviewing people about its history. While the community is now served by the T or C priest when baptisms and burials take place, it was formerly served by the Monticello priest. Information recorded at the cemetery included the range of burial dates; names from marked headstones; approximate location of graves, dense vegetation and apparent empty areas;

Table 8.1 Individuals Interviewed, Cuchillo Assessment Study, ACOE, 1985

Cuchillo

Apodaca, Jesus
Bechtel, Nellie Moselle
Mitchell, Nalda
Tafoya, Aldon
Tafoya, E.G.
Trujillo, Chris
Trujillo, Rosie
Tucker, Thelma
Wynne, Jim

Truth or Consequences

Evans, Verny D.
Evans, Mrs. Verny D. (Selfa)
Montoya, Mrs. Emilio (Virgilia)
Montoya, Frank J.
Padilla, Max
Romero, Joe
Tafoya, Benny
Tafoya, Jacova "Jack"
Tafoya, Linda

and photographs showing the range of variability in grave coverings, headstone manufacture, fencing, tending, and obstruction of visibility due to shrub or weed growth, aeolian action or cobble deflation.

Interview structure differed according to whether the subject lived in Cuchillo or T or C. More questions were asked of the nine Cuchillo residents than of the nine T or C inhabitants. The T or C interviews, with one exception, were made over the phone on the third day of fieldwork. The earlier Cuchillo interviews were all made in person. Personal interviews provided more time for questions. Moreover, the T or C residents, because they no longer reside in Cuchillo, could not answer some of the questions on conditions in present-day Cuchillo. Questions asked of Cuchillo residents are given in Table 8.2 and those asked of T or C residents are given in Table 8.3. While these questions served to direct the interviews, talk was not limited to these topics.

8.3 RESULTS

8.3.1 History of the Cuchillo cemetery

Informants' accounts and documentary records in Wilson (1985) placing the founding of Cuchillo sometime between 1860 and 1872 suggest that the cemetery was established shortly afterward in the 1870s. Because the T or C priest, Richard P. Lynch, has only been stationed in the area for 11½ years, he is unaware the location of any burial records for the cemetery. Evidence based on tombstone dates is provided in Section 8.3.2.

St. Joseph's church is located approximately 1km (1/2 mile) west of the cemetery on the north side of the main Cuchillo road. The church is much more recent than the cemetery. It appears to be 40-60 years old. The plaster statue of La Virgen de Guadalupe in the church is signed by Jesus Barrera of El Paso and dated 1943. The statue is placed in a recessed arch integral to the building, which is built primarily of wood, so the 1943 inscription may date the completion of the church. It is not known if the church was built on an earlier foundation. With older buildings on either side of the church and the hillslope rising just behind the church to north, there is little room adjacent to the church for a campo santo. It seems likely that services used to be held in Monticello, where the priest resided before the church was built. The celebration of St. Joseph's feast day, then, would have begun with the building of the church.

8.3.2 Description of the Present Day Cemetery

The consecrated ground of the cemetery is enclosed by a barbed wire fence with a gate in the center of the north side (Figure 8.1). The enclosure measures approximately 70 meters north-south by 60 meters east-west and is roughly rectangular. The number of graves cannot be determined because many of the cobble- and pebble-covered graves, especially in the older south and west sections, are obscured by soil and vegetation. Based on the 200 graves visible in the more recent east section, some 300-350 total graves may be present.

The range of dates on legible headstones is 1901-1984. Many of the large river cobbles used as headstones, however, were not carved with the

Table 8.2 Cuchillo Interview Questions, Cuchillo Assessment Study, ACOE, 1986

-
1. Have you lived here long? Has your family lived here long?
 2. Have your neighbors been living here a long time?
 3. Who has lived here a long time?
 4. Do most people work locally or commute? Where do they commute to? Where did they commute to in the past?
 5. Do you have relatives buried in the cemetery? Which ones? How many? How long ago?
 6. How often do people go there to tend the graves, place flowers, weed?
 7. Have people been buried there recently?
 8. What concerns do you have about protecting the cemetery? Do you have any ideas for ways to protect it from impact by the dam if it is built?
 9. Is it all right for me to mention in the report that I talked to you?
-

Table 8.3 Truth or Consequences Interview Questions, Cuchillo Assessment Study, ACOE, 1986

-
1. How long did you live in Cuchillo?
 2. Do you have relatives buried in the cemetery? Who are they? How many?
 3. What concerns do you have about protecting the cemetery from the dam's impact? Do you have any ideas for ways to protect it?
 4. Is it all right for me to mention in the report that I talked to you?
-

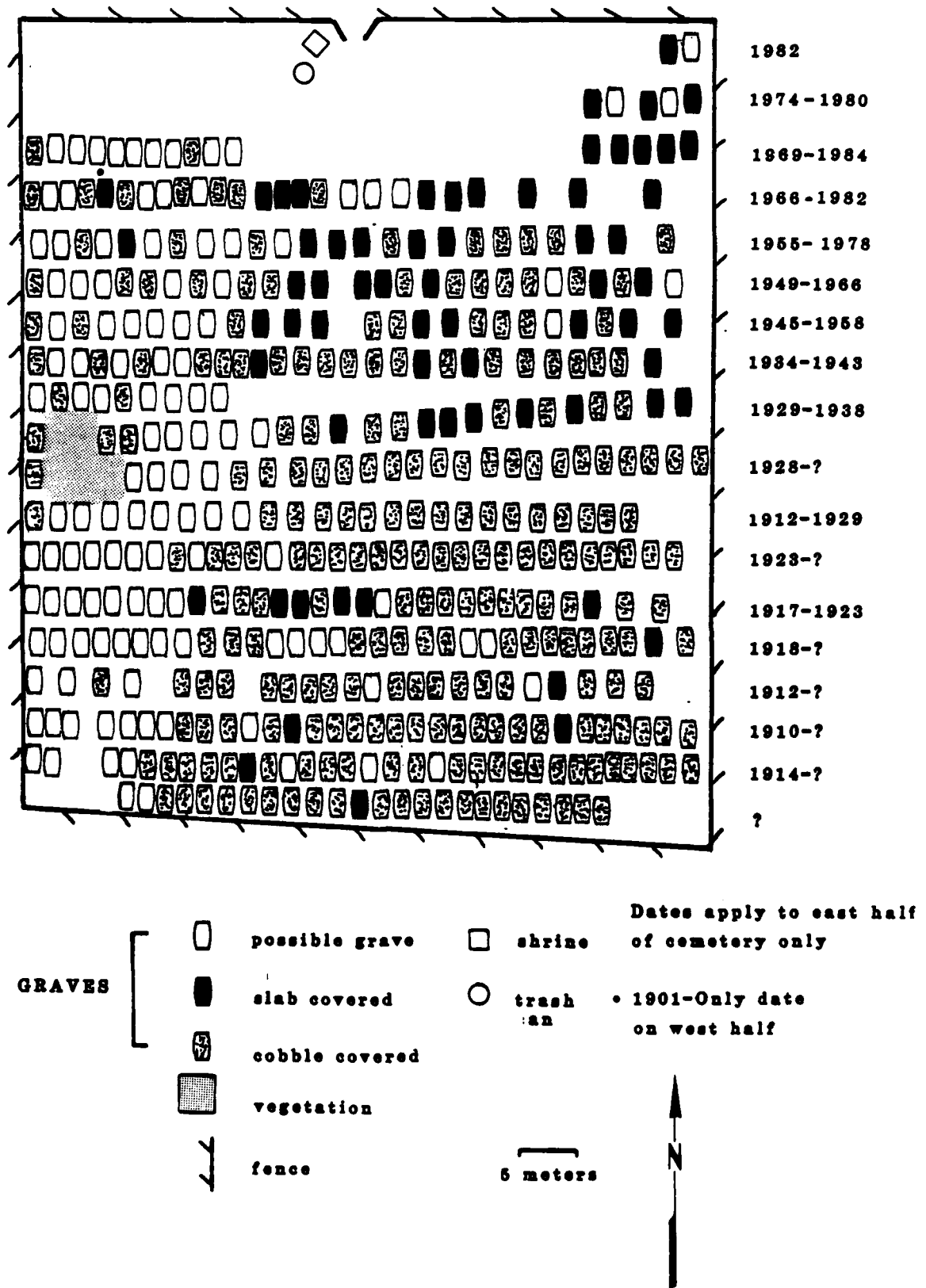


Figure 8.1 The Cuchillo Cemetery

date, only with the initials of the deceased. The oldest headstone observed dates to 1901 and is located near the north end of the cemetery on the west side. No other west side dates were observed. On the east half, the southernmost row had no dated tombstones. All other rows contained at least one dated tombstone. These ranged in date from 1910 at the south end to 1984 at the north end. Burials were not strictly ordered from south to north, however. Similar last names were often grouped together and probably represent informal family plots where the deceased was buried near relatives.

Vegetation is most dense in the south half of the cemetery, supporting an older date for this area than for the north end. Shrubs (mesquite and creosote) are prevalent in the south end and a 10 x 15 m stand of weeds and grasses is present near the center of the west half near the fence. Grasses and weeds are most common in the west half and the southwest quarter. The graves in the west half are the least visible because of eventual compression of the soil following burial and colluviation over the cobbles covering the graves. The apparent "empty areas" may contain graves but they are no longer visible if present. The only areas that probably are empty of burials are at the north end of the cemetery near the entrance.

Tombstone manufacture and grave coverings are quite variable. The more recent graves in the east half feature professionally carved limestone, sandstone, marble, and cast concrete headstones. The majority of the graves are covered with river cobbles and, less frequently, pebbles. Occasionally a large cobble is carved with the initials of the deceased or, less rarely, the date of burial; these are often placed above the head (usually oriented to the north) and sometimes above the center of the body. All concrete slab covers occur in the most recent NE 1/4 of the enclosure. All of the graves in the west half are cobble-covered. The cobble-covered graves may be marked with a line of cobbles at the head and sometimes with an arc of cobbles. Ten to 20 graves were once surrounded by wooden or iron fences. Many of the wooden ones have collapsed and some of the iron ones have been removed, judging from the oxidation on the top of cobbles overlying these burials.

Just inside and west of the entrance gate is a plaster Sacred Heart of Jesus statue inside an arched brick structure painted white. The structure was built by Estanislado S. Tafoya, whose grave is in the NE 1/4. Mr. Tafoya died in 1974. Grave decorations were placed on graves in the more recent NE 1/4. These decorations consisted of artificial flowers, ceramic or stone vases, mortuary plaques giving name of deceased and dates (either printed on paper or hand-engraved on aluminum), and small statues of plaster or stone. In between two graves was a glass-covered, wooden-framed reproduction of a pencil drawing of the Virgin Mary with artificial flowers inside the frame.

8.3.3 Concerns of the Cuchillo Community about Protecting the Cemetery

Reactions of community members interviewed regarding the proposed dam's impact on the Cuchillo cemetery ranged from no comment to professed apathy to a great deal of concern. Four of 18 individuals were very con-

cerned, six were somewhat concerned, five expressed no concerns, and three would not comment. Present Cuchillo residents were either very concerned, somewhat concerned, or would not comment; only one was apathetic. Those with no comments either had no relatives buried there or perhaps did not want to become involved in disputes about the dam. Those who expressed no concerns have lived in T or C or outside Cuchillo for at least 10 years. As T or C residents, they may benefit from dam placement upstream. Other contributing factors may be lack of current kinship ties with Cuchillo or lack of land ownership in Cuchillo. Only one person with no concerns lives in the valley presently; she has no relatives buried in the cemetery. Those somewhat concerned about impacts on the cemetery include both Cuchillo and T or C residents. Most of the respondents in this category own land in Cuchillo.

The interviewees who were very concerned about impacts on the cemetery include those who do and do not own land in Cuchillo. All have relatives buried in the cemetery.

Most of the respondents who commented on impacts on the cemetery were against reburial. One was adamant that such a move would not be completely successful since many of the older graves are poorly marked. The most frequently mentioned idea for lessening impact was building a wall around the cemetery to insure it would not be flooded. Also mentioned several times were spillways to vent overflow water to prevent the floodpool rising to the level of the cemetery. One respondent suggested that a contract be signed with the Corps guaranteeing no flooding of the cemetery would occur.

It is likely that those who would not comment are either concerned not to get involved in factional disputes about the dam or may be in favor of the dam. Many did not separate the cemetery issue from the landholding issue. One would not comment on the cemetery even though she had relatives buried there because she had no land that would be directly affected by the floodpool.

8.4 CONCLUSIONS

Although Cuchillo's current population is about half of its size in 1880, it still exists as a coherent community, bound by current and past ties among present-day and former residents and by landholdings. The fact that many current residents referred the interviewer to people living in T or C for information on Cuchillo indicates that the community does not consist of present-day residents alone. Many people who grew up in Cuchillo have moved because they could not make a living there. Most of those interviewed have relatives buried there. While some respondents may not have wished to be involved in the dam dispute or felt that the dam would not flood or otherwise affect the cemetery, they were concerned that proper respect be given to their ancestors. I was told that many people not currently living in Cuchillo wanted to be buried there when they die. It is clear that people do care what happens to the cemetery. The graves are occasionally tended although many of those who used to look after it have died or moved away.

The village has always been primarily Hispanic. Family ties are strong and many people who have moved to T or C to work still own land in

Cuchillo and visit there on weekends or on feast days. Some maintain homes in both places. The issue of protecting the cemetery is perceived by some respondents as directly related to disputes about dam placement. The concern about the cemetery, however, is not confined to those with land in the valley or land to be impacted by the floodpool. Many of those with relatives buried there and ties to the community are concerned that the cemetery be protected against impacts from the dam.

9.0 SUMMARY AND DISCUSSION

Cultural materials encountered during this study ranged from a possible PaleoIndian piece, through Middle and Late Archaic isolates and sites, Mimbres and later Mogollon/Pueblid sites or finds, a probable Apachean worked-glass isolate, and numerous recent historical resources. Paleo-Indian materials are of course very rare in the area; the isolated find of a possible Milnesand/Agate Basin point appears to be only the second report of that type from southwestern New Mexico. Found on the surface of site LA 53483, this piece may indicate recycling of a chance find by the Mogollon site occupants, the presence of a Paleo-Indian component on LA 53483, or (more disturbing) the presence of a sophisticated level of lithic craftsmanship in an A.D. 750-1000 Mogollon community. It is common knowledge that Late Archaic and Early Ceramic bifaces are often of very high craftsmanship; there seems to be no objective, reliable, quantifiable way to discriminate less formalized PaleoIndian materials from exceptional Early Formative work.

Middle or Late Archaic sites in the study area are potentially valuable in that most such sites seem to be present in higher elevations or along the Rio Grande; the Cuchillo sites may as a consequence represent a relatively unknown component of Archaic adaptation in the region. Recognition of Archaic sites is hampered by several factors. First, though most lithic analysts in New Mexico are concerned about, and currently working on, the problem of chronometric debitage analysis, most problems remain unsolved. This problem is illustrated by the Cuchillo sites. LA 53485 is probably, at least in part, Middle Archaic in age, and it seems to have no formative overlay. Yet it does not differ greatly in debitage character from debitage assemblages almost certainly pertaining to Mimbres occupation. The most that can be said from the surface-monitored assemblage may be that Archaic lithic reduction, in the functional context of LA 53485 only, emphasized slightly better materials, slightly more blade and biface production, and rather less flake utilization or retouch, than did Formative reduction on adjacent sites. Amateur collection of fairly low intensity at a site such as LA 53485 would result in a skewed assemblage indistinguishable from that of an undisturbed Formative site, since amateurs would go after "pretty" (i.e., - high quality) pieces, unusual forms, and tools.

Conversely, a light Formative reoccupation overlying an Archaic site would probably render invisible the preceramic occupation, as flakes would be recycled, new reduction would occur, and ceramics would be deposited. This has probably happened, at minimum, on sites LA 53486, and LA 53490. The apparent rarity of Archaic sites in the middle reaches of western Sierra County drainages may be due in large part to this "reoccupational obfuscation" in the spring-line or middle reaches of drainages such as the Cuchillo Negro. We must consider that in Lekson's (1984:188-197) model, Tchihene Apache subsistence is fundamentally Archaic in character. Lekson argues that, since the scale of Mimbres whiteware sites closely approximates that of the historically documented Tchihene Apache territory in the same area, the Mimbrenos were hunters and gatherers as well as farmers.

His argument considers the availability of storable foods and population size, as well as scale of territory. His application of the model to the Classic Mimbres serves to emphasize that, insofar as the Mimbrenos were subsisting like Tcihene Apaches, not only Mimbres and Apache sites, but also Late (and perhaps Middle) Archaic sites may be expected to occur in the same locations. As a result, little confidence can be placed in associational dating of lithic assemblages in the Cuchillo, at least until further chronometric and adaptational implications are related to types of lithic debitage.

Similar problems beset the identification and consequent explanation of Early Pithouse/Early Mesilla, Late Pithouse/Mesilla, and Early Mimbres/Mangus/Late Mesilla sites. The ceramic assemblage chronology of Mills (1985), followed by Lekson (1984) and the present authors, is fundamentally additive during the Pithouse periods. The only major assemblage component evolved, modified, or lost during this span is Mimbres B/W, which evolves, then disappears in favor of Chupadero B/W around A.D. 1150. The plainwares simply persist, unless one is prepared to accept that El Paso Brown is always distinguishable from Jornada Brown/Alma Plain. One should recall that none of the plainware types was defined locally, that all were perhaps made locally, and that plain brownware is invariably variable, even within a single vessel.

It follows that ceramic assemblages, if not previously overcollected, can indicate later occupations but cannot reliably indicate earlier occupations with later components. It also follows that small ceramic assemblages, dominated by plain brown and redwares, will often be of no chronometric value whatever.

In the present study, we simply cannot assess the possibility that sites bearing ceramics may have a pre-Mimbres component. Lekson's generalizations regarding architecture are, at Cuchillo, of limited help chronometrically. He draws distinctions between cobble masonry and adobe masonry; the former seems to characterize Mimbres and "affinis Magdalena" while the latter characterizes the El Paso Phase. An intermediate type is apparently common at Cuchillo: one-room to three-room structures, semi-subterranean, cobble and upright slab-lined, with (sometimes) evidence of adobe or adobe-and-cobble superior courses. Upon testing, one of these structures proved to contain multiple floors.

It should be noted that survey-based generalizations on the difference between adobe-cimiento, slab and cobble, or cobble masonry are unreliable at best. Aggraded and filled examples of all three construction types are likely to be indistinguishable upon surface inspection; moreover, the best examples of cimiento construction encountered on the survey proved to be historical: the LA 50549 structure was constructed by Ms. Nalda Mitchell as a child, while LA 53491 is a relatively recent historical structure.

Nevertheless, it is clear that a number of sites recorded during this project pertain to Mogollon occupation during the Early or Classic Mimbres or later Phases. These may include LA 50548, LA 53480, LA 53483, LA 50550, LA 50547, LA 53488, LA 53489, and LA 53490. Additional components may include a hilltop shrine or watch station at LA 53479 and perhaps a dozen floodplain sites now completely buried or destroyed (see Section 7.1).

AD-A194 704

REPORT OF CLASS III SURVEY AND TESTING OF CULTURAL
RESOURCES AT CUCHILLO NEW MEXICO(U) MARIAH ASSOCIATES
INC ALBUQUERQUE NM J C ACKLEN ET AL. APR 86 235-F

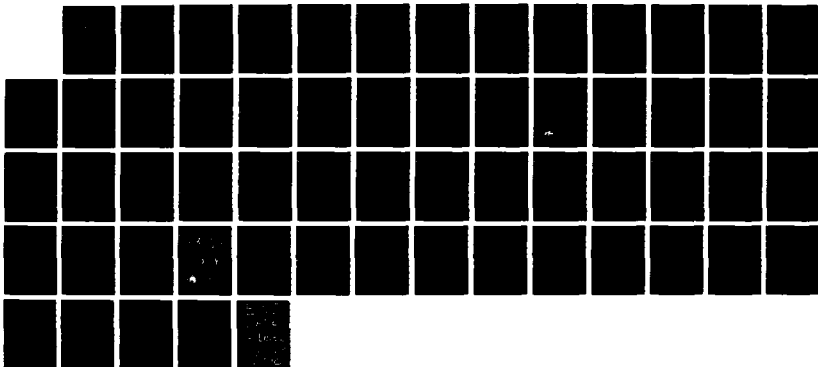
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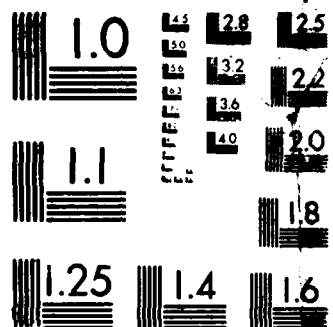
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

Among these sites, architectural forms include isolated rooms, roomblocks of three cells, a pithouse or kiva, a great kiva (Lekson's Great Hole in the Ground), a large cleared area, a small cleared area, a small paved area, and two apparent pithouses which, upon testing, proved to be depressed cleared areas. Tests did not permit assignment of phase designations to most structures, although a radiocarbon sample was recovered from one site. Most structures, on the strength of recovered ceramics, probably pertain to Early Mimbres or Classic Mimbres although post-Mimbres diagnostics were encountered. The Mimbres and possibly post-Mimbres complex encountered at Cuchillo probably represents a unique local center for that time period; it is a valuable and irreplaceable resource due both to its dispersed community nature (six to 18 small sites in one complex) and to the fact that several components seem to have been occupied into the post-Mimbres period. The "community" around the Great Kiva probably also includes small sites LA 1164, LA 1165, LA 1168, LA 50542, LA 50543, LA 50544, LA 50545, and LA 50551 located below the project area on the lower box; these were documented by Lekson (1984).

The lithic assemblages associated with these sites, as noted earlier, are not greatly different from Archaic assemblages. It is unclear whether the perceived similarities reflect admixture of truly Archaic assemblages, inappropriate analysis, or the correctness of Lekson's interesting suggestion that the Mogollon should be viewed as variably horticultural, pot-making hunter-gatherers. The present study's discovery that at least one structure exhibits multiple floors may indicate cyclic (i.e., migratory) reoccupation, as may the paucity of extramural midden and artifacts on these sites. The substantial difference between Puebloan Cibola (Tularosa Phase) adaptations and rather unpuebloan (El Paso Phase) Jornada adaptations following the Mimbres period mean that the "Cuchillo frontier" may be an invaluable resource in the eventual elucidation of the adaptational differences between these very different systems.

The presence of affinis Magdalena B/W or "Truth-or-Consequences B/W" is most notable on a cluster of large sites on Palomas Creek. Lekson (1986, Personal communication) has seen sherds at other El Paso Phase sites on the Rio Grande and on Palomas and Animas creeks; he suspects that "Galisteo B/W" noted as a very minor component of ceramic assemblages at El Paso sites throughout the area, also represents affinis Magdalena B/W. Either residential or foraging/logistic/seasonal sites of this system present outside the Palomas are clearly valuable resources, potentially crucial to our understanding of a substantial, shortlived, probably colonial occupation.

The possibility should be seriously entertained that ten or more structural sites in the Cuchillo are reported to have been completely hidden by alluviation; these may include a large Mimbres, Tularosa, El Paso, or "T-or-C" phase site. Should this be the case, every effort to recover information from these rare, deeply buried, and well-preserved contexts should be made.

On the smaller structural prehistoric sites, a major interpretive problem is related to contemporaneity of features. Our interpretations of these dispersed "communities", or settlements consisting of scattered structures inhabited by people who interact in subsistence and ritual pur-

suits, as is true all over the Southwest, depend heavily on the assumption that the structures in question were indeed occupied at the same time. Consider the theoretical problems implied should none of the small structural sites prove to be contemporaneous with the LA 50548 Great Hole in the Ground. Extensive extramural excavation is clearly required to assess contemporaneity; new techniques may be needed to evaluate the "pavements", "cleared areas", and "nonpithouse depressions" observed in the present study.

Concern for the discovery of Apachean sites in the Cuchillo Negro must continue, despite the almost totally negative results of this study in Apachean site discovery. No one as yet has experienced substantially greater success; Apachean sites are very hard to identify. Further research may yet indicate that valuable Apachean resources are locally present. Prior to the Hispanic settlement of the Cuchillo Negro Valley in the 1860s, the area was Apache territory. Hispanic agriculture and stockraising led to increased settlement and the founding of Cuchillo around 1870. Anglo settlement began later, around the turn of the century. Economy in the valley seems to have depended on mixed subsistence and truck gardening, with the uplands being used for mixed livestock grazing. Wage labor opportunities were limited until the construction, early in the 20th century, of the major Rio Grande reclamation projects a few miles to the east. Stream irrigation, important until the 1940s, is currently less reliable; at least one acequia (IO-56) was abandoned in the late 1940s.

Historical sites recorded in the present study relate to two periods: 1870-1900 and post-1900. Nineteenth century sites include the stage station component of LA 53484 and possibly the large habitation, LA 53493. Twentieth-century sites include a mine, now abandoned, at LA 53481; the illegal immigrant component of LA 53482; the playhouse at LA 50549, the recent and ca. 1940 components of LA 53484; the Huffman 1930s to 1970s homestead at LA 53487; the 1900s to 1970s homestead at LA 53492, the large ruin historically undocumented as of yet, LA 53491; and the historically undocumented homestead, probably abandoned no later than the 1930s, at LA 53493. No date is suggested for the numerous cairns, recorded as isolates.

10.0 Management Recommendations

10.1 Probable Impacts

Present or potential adverse effects to the archaeological resources encountered in the present study may be categorized as direct or indirect. Direct impacts of the proposed project include flooding and construction, while indirect impacts include increased access and visitation, leading to vandalism, erosion, occupational disturbance, and amateur collection. Present or past impacts noted during this study included surface and sub-surface vandalism, bulldozing and construction, erosion (mostly induced by grazing), ongoing alluviation, and reoccupation of site areas.

Probable future impacts are tabulated for each recorded site in Table 10.1. In the impact analysis presented here, it is assumed that runoff events will periodically fill the reservoir to peak capacity resulting in possible inundation, wave action, erosion, and sedimentation on sites up to 4737 feet above sea level. It is further assumed that construction and maintenance of dam facilities will result in increased access to the project area. This is, in effect, a worst-case scenario.

The two sites above elevation 4737 feet, LA 53491 and LA 53493, should be considered secure against even catastrophic flooding and wave action. LA 53491 lies, however, at the confluence of the Cuchillo Negro and Willow Springs Draw and is consequently subject to major flash flood damage. The sites between 4710 and 4737 feet are in a lower impact zone but, nonetheless, real probability of water related damage exists. These sites include LA 50548, LA 53479, LA 53490, and LA 53491. However, site LA 50548 will probably be subject to direct impact in dam construction. Also, site LA 53490 has a prehistoric structure and will be at risk to vandals due to improved access.

Sites lying above 4680 ft. are at risk due to normal reservoir flooding, access, and wave action. These include LA 53485, LA 53486, LA 53492, and LA 50549, a noneligible recent structure, as well as LA 50547 and LA 53480, small Mogollon structural sites also at risk to vandalism.

Sites lying below 4680 ft. are definitely at risk due to proposed inundation. These sites include LA 50550, LA 53481, LA 53482, LA 53483, LA 53484, LA 53487, LA 53488, LA 53489, and LA 53494, as well as those undetected prehistoric structural sites reported by an informant (Section 7.1).

Thus, with the exception of two sites, LA 53479 and LA 53493, all sites reported in this study definitely should be considered at some risk due to ongoing or projected impacts.

10.2 Protective Measures

As detailed in the previous section, only two sites are relatively secure against current impacts or direct or indirect impacts resulting from the proposed construction; only two additional eligible or potentially eligible sites and one noneligible site are considered to be at moderate

Table 10.1 Site Character, Integrity and Significance, Cuchillo Assessment Study, ACOE, 1986

LA #	Marlab #	Site Type	Integrity	Probable Impact	Recommended Eligibility for NRHP	Eligibility Criterion	Recommended Next-Stage Treatment	Elevation (ft)
50547	235F-9	Mogollon small structural	high	construction direct	eligible	60.6d	full data recovery	4695
50548	235F-2	Mogollon struct. central place	high	construction direct	eligible	60.6d	full data recovery	4730
50549	235F-7	child's playhouse	high	flooding	noneligible	-	no further work	4670
50550	235F-8	large Mogollon structural	bulldozed	flooding	insufficient data	-	surface collection test excavation	4660
53479	235F-1	possible Mogollon shrine	uncertain	indirect	insufficient data		test	4760
53480	235F-3	small Mogollon structural site, calrn	high	flooding	eligible	60.6d	surface collect & test	4690
53481	235F-4	manganese mine	high	flooding	insufficient data	60.6a & d	archival	4660
53482	235F-5	rock shelter	uncertain	construction	insufficient data	60.6d	test	4640
53483	235F-6	Mogollon struct. complex	high	flooding	eligible	60.6d	surface collect & test	4675
53484	235F-10	stageshop homestead	uncertain	flooding	insufficient data	60.6a & d	test	4660
53485	235F-11	Archaleo scatter	high	flooding	eligible	60.6d	surface collect & test	4700

4 2 2722 53 3423 1503 1803 2003 2203 2403 2603 2803 3003 3203 3403 3603 3803 4003 4203 4403 4603 4803 5003 5203 5403 5603 5803 6003 6203 6403 6603 6803 7003 7203 7403 7603 7803 8003 8203 8403 8603 8803 9003 9203 9403 9603 9803 10003

Table 10.1 continued

LA #	Marion #	Site Type	Integrity	Probable Impact	Recommended Eligibility for NRHP	Eligibility Criterion	Recommended Next-Stage Treatment	Elevation (ft)
53486	235F-12	Mogollon scatter	vandalized	flooding	insufficient data	60.6d	test	4700
53487	235F-13	historic habitation	dismantled	flooding	eligible	10a & d	limited surface collection, archival	4670
53488	235F-14	Archaic scatter with potential struct. component	uncertain	flooding	insufficient data	60.6d	surface collection, test excavation	4660
53489	235F-15	Mogollon scatter with potential struct. component	uncertain	flooding	insufficient data	60.6d	surface collection, test excavation	4660
53490	235F-16	Mogollon struct.; Archaic scatter	high	flooding	eligible	60.6d	surface collection, test excavation	4710
53491	235F-17	large historic structure	dismantled	flash flooding	insufficient data	60.6d	limited surface collection, archival	4740
53492	235F-18	historic habitation	high	flooding	insufficient data	60.6d	limited surface collection, archival	4700
53493	235F-19	historic habitation	dismantled	indirect	eligible	60.6a & d	limited surface collection, archival	4780
53494	235F-20	rockshelter	uncertain	construction	insufficient data	60.6d	test excavation	4620

risk due both to their being situated outside construction areas at elevations greater than 4680 ft. and also to their contents being generally unattractive to vandals. The remaining 15 sites include the eligible or potentially eligible sites lying at elevations between 4680 ft. and 4737 ft. All sites will require mitigative measures should the project proceed as proposed.

Of the two remaining sites, it is likely that site LA 53493 can be adequately protected by avoidance or sufficiently mitigated by archival work; followed, if indicated, by limited surface collection. Site LA 53479 is not yet sufficiently known to permit determination of its eligibility status; testing is recommended.

10.3 Eligibility of Identified Resources

Of the 20 cultural resource sites identified in the present study, one is considered ineligible for nomination to the National Register of Historic Places, and the remaining 19 are considered potentially eligible for inclusion in the National Register. The noneligible site, LA 50549, was first interpreted to be a cimiento structure or historic tent base; in interview, it was discovered to be a child's playhouse alignment. Of the remaining 19 sites, four are Mogollon structural sites: LA 50547, LA 50548, LA 53480, and LA 53483; one is a multicomponent Mogollon structural and Archaic lithic site, LA 53490; one is an Archaic lithic site, LA 53485; and two are historic habitation sites, LA 53487 and LA 53493. The Mogollon sites are judged eligible on the grounds of demonstrable cultural deposition within features, indicating their potential to yield information important to prehistory (36 CFR Part 60.6.d). The Archaic site, LA 53485, is judged eligible on the grounds of richness of assemblage, depositional potential, and assemblage uniqueness as compared to other sites encountered in the course of the present study, thus implying potential to yield information important to prehistory (36 CFR Part 60.6.d). The historic sites considered eligible, LA 53487 and LA 53493, are so judged due to their having structural walls, mounds or foundations and other features in relatively good condition, associated with middens exhibiting artifacts more than 50 years old. These two sites thus have substantial potential as historical resources pertaining to the early twentieth century and especially to the poorly studied local effects of the Great Depression on rural southern New Mexico (36 CFR Parts 60.6.a and 60.6.d). All other sites (LA 50550, LA 53479, LA 53481, LA 53482, LA 53484, LA 53486, LA 53488, LA 53489, LA 53491, LA 53492, and LA 53494) documented in this study are judged to be potentially eligible but may require further evaluation in order to clearly determine integrity, richness, or deposition (see next section).

10.4 Resource Potential for Data Recovery

Should further studies be undertaken at the sites recorded in this project, recovery of a wide range of clearly significant data may be expected. Data potential varies for Archaic, Mogollon, buried, rockshelter, and historical sites.

Archaic Sites. As noted earlier (Section 3.1), Archaic sites in western Sierra County are at best poorly known, difficult to distinguish

from Formative sites, and hard to evaluate on the basis of surface observations seriously biased by past amateur collection. In this situation, any controlled data recovery program which can address problems of feature and site structure definition, multicomponency, and season/subsistence/mobility evaluation will make substantial contributions to our understanding of the Archaic in southern New Mexico. Until a minimal corpus of such data is accumulated, attempts to evaluate the uniqueness of these sites are inappropriate and premature. In the interim, sites LA 53485 and LA 53488 should be treated as unique, rare resources to be suitably evaluated and fully protected or mitigated.

Mogollon Sites. Prehistoric ceramic-period sites in the study area fall into several classes: a central place (LA 50548), a damaged possible central place (LA 50550), a structural complex (LA 53483), small structural sites (LA 50547, LA 53480, LA 53490), scatters with possible structural components (LA 53486, LA 53489) and possibly some ten other buried sites about which almost nothing is known, but which might prove to include any or all of the above structural classes or others not yet known from the study area (e.g., late El Paso, Tularosa, or "T-or-C" large or small sites).

Data potential evaluation and priority definition for all the reported and documented sites must be approached both from a site-specific perspective and also from the viewpoint of community and regional interaction. Priorities of importance, grouped by data sufficiency, are presented for these sites in Table 10.2. Considered both on its own merits and relative to other known sites, there is little question that LA 50548 is the most significant site encountered to date in this study. It is made up of units representing nearly the full range of Mimbres architectural types, from small paved and cleared areas to a "Great Hole in the Ground", and it probably represents the (unique?) central place for the Transitional and Early Classic Mimbres community in the middle Cuchillo drainage. Moreover, evidence of multiple occupations within a single structure were obtained in testing of Structure B (Section 6.2.1), implying that data can be obtained bearing directly on Lekson's Tcihene model for Mimbres subsistence and mobility. The opportunities on this site to associate architectural and ceramic types with absolute dates cannot be overemphasized; the chance to perform a long-overdue stratigraphic evaluation of structure contemporaneity in a Mogollon "village" should be grasped if LA 50548 is mitigated.

The structural complex at LA 53483 is clearly of the same order of potential data value as LA 50548. Determining the occupational contemporaneity of elements at LA 53483, one with another and also relative to LA 50548, would greatly add to our understanding of Mogollon community organization and organizational change in "nonheartland Mimbres" areas.

The opportunity to recover ecofactual data in an undisturbed context in these sites is becoming increasingly rare as vandalism continues. Subsistence data from LA 53483 would be invaluable and readily obtainable, as would the other classes of data already discussed for LA 50548.

The possibly large but vandalized site LA 50550 cannot be evaluated without further testing, but its data potential may prove to rival that of

Table 10.2 Potential Importance Priorities: Cuchillo Negro Sites, Cuchillo Assessment Study, ACOE, 1986

<u>Sites with Sufficient Data for Assessment of Potential</u>		
Site	Priority ^{1/}	Justification
LA 50548	1	May be the only "Preclassic Mimbres" central place in drainage; good multicomponent deposition; will be destroyed
LA 53483	2	May be the only "Later Mogollon" central place; good deposition; will be destroyed
LA 50547 LA 53480 LA 53490	2	Outlier components of LA50548 or LA53483; good deposition; analytical advantages of small sites.
<u>Sites with Less Complete Data</u>		
LA 53485	2	Archaic site
LA 50550	2	May be large site or may retain intact early component
LA 53486	2	Outlier may not have deposition; analytical advantages of small site
LA 53488 LA 53489 and other "buried sites"	1	May be large or unique sites; exploratory work is essential
LA 53482 LA 53494	2	Rockshelters; in danger
Historic Sites	2-3	Historic sites; prioritize after completion of archival evaluation
LA 53479	3	Small, probably disturbed, probably not in danger

^{1/} 1 = highest priority
3 = lowest priority

LA 50548 if substantial deposits are present. An example of the great remaining potential of such vandalized sites is provided by the Galaz Ruin (Anyon and LeBlanc 1984); LA 50550, like Galaz, is believed to have been a relatively large architectural complex with great temporal depth and multiple late affiliations or interactions (El Paso, Tularosa, and "T-or-C" diagnostics all occur).

The data potential of Mogollon small architectural and non-architectural sites (LA 50547, LA 53480, LA 53490, LA 53486, LA 53489) should be assessed as a group. They probably represent integral, but spatially separate, components of relatively dispersed communities. All of them demonstrably or potentially possess the same or complementary data resources for study of subsistence, seasonality, settlement, and regional interaction as do the larger sites. Moreover, if Lekson's speculations on patterns of change in community architecture through time prove to be valid, it may develop that only one or two sites constitute the total small site population for some periods of occupation. It follows that further chronometric evaluations are required before decisions can be made regarding the relative research priorities of the smaller Mogollon structural sites.

Rockshelter Sites. The two rockshelters were not tested and the surface remains provide insufficient data to assess their potential. No artifacts were exposed at the surface, and the depositional character and human occupation, if any, are unknown.

Buried Sites. Prior to completing decisions on which community components should be sampled, it will also be necessary to carry out extensive determinations on the presence, extent, character, and condition of the "buried" sites reported by an informant (see sections 7 and 9). If verified, these would constitute the entire suspected population of valley bottom Mogollon sites, only two of which were detected and recorded in this survey. These may include additional central places, small structure community components, or both. Only when a large fraction of the structural sites within the study area are known can realistic assessments of the importance of any of the Mogollon sites be made.

The possibility that "buried" sites exist within the project area is of great regional interest. Due to the relatively uniform geomorphology of the western Sierra County drainages, the Cuchillo Negro buried sites represent an opportunity to assess the degree to which alluviation has skewed samples for all those drainages which have a "spring line" and consequent aggradation upstream from upthrust blocks and the resultant box canyons. If most of the Cuchillo Negro valley floor sites are in fact buried, then it is likely that similar situations obtain in the Palomas, Alamosa, Seco, and Las Animas valley spring line settings as well. If so, then we lack a substantial base for Mogollon settlement analysis all along the west slope of the Black Range and not merely in the lower Cuchillo.

Historical Sites. Historical sites in the study area are potentially valuable primarily as documents of those details of economic and subsistence behavior of interest to archaeologists, demographers, economists, and historians, but they also have substantial value as evidence of the

geomorphological processes which have modified the local landscape during the last century. Unique opportunities to study these phenomena may exist at the stage stop/Lockney site (LA 53484) and, to a lesser degree, at the Huffman homestead (LA 53487); both of these sites will require additional testing to fully assess their potential. Other historical sites (LA 53481, LA 53491, LA 53492, LA 53493, and perhaps LA 53479) may also have substantial potential, but further archival work is required before their potential can be properly assessed and their priority of importance determined.

10.5 Data Recovery Strategies

The design of data recovery strategies for endangered resources must properly take account of scientific value, data potential, adequacy of knowledge of the specific resource, realistic limits on expendable effort, and degree of probable impact. In the following presentation, strategies are suggested which are based only on scientific value, data potential, and adequacy of knowledge. In the absence of data on expected impacts or anticipated levels of effort, it was decided to provide strategy proposals which presume that full data recovery programs are to be implemented and that these remarkable and possibly unique sites are to be heavily impacted. These proposed strategies, in consequence, can reflect only our evaluation of data potential, resource extent and value, and adequacy of evaluation. It is our view that the expenditure of effort required for full data recovery is an inappropriate treatment for those sites subject to less than total impact.

Methodological Considerations. At the methodological level, the design of data recovery strategies for the Cuchillo Project sites must take into account not only the peculiarities of Archaic and frontier Mogollon archaeology and their central research and management problems but also certain rather unique but centrally important problems of site and feature definition, which may not have been sufficiently appreciated in previous studies.

As discussed earlier (Section 3.1.1), local Mogollon sites present special problems for the excavator, in that:

1. most lack substantial extramural midden,
2. most midden deposits lie in subsurface features or in rooms,
3. numerous important subsurface features (burials, cists, older pithouses) may be expected,
4. site structure is typically one of dispersed small structures and features, and
5. surficial features (plazas, cleared areas) are important social and architectural components.

Several stratigraphic problems flow directly from these observations:

1. The dispersed nature of architecture ensures that exposed sites do not aggrade due to structural dissolution.
2. Lack of external midden also contributes to slow rates of site aggradation.

3. Consequently, stratigraphic establishment of feature contemporaneity is difficult.
4. Also consequently, mechanical, horizontal surface stripping for feature discovery is inadvisable, due to the loss of subtle stratigraphic context and data from surficial features.

Nearly universal past failure on the part of archaeologists to solve those problems has resulted in our inability to determine whether the dispersed architectural sites so far excavated and published represent communities or multiple reoccupation over time of different structures at a single general location. In short, we may not be seeing the components of a contemporaneous "community" at all.

By contrast, in cases where Mogollon sites have aggraded rapidly during use and after abandonment, information on surficial feature placement crucial to understanding site use and social organization is lost, and subsurface features become even harder to locate.

Especially in the "Mimbres province", vandalism poses serious technical problems in mitigation design. Exposed sites are often so heavily collected that substantial testing effort is required merely to establish the overall structure of the site (see especially the discussion of LA 53486, Section 5.1.12). In other cases, the visible organization of sites has been destroyed by bulldozing, although subsurface features may retain substantial data potential (see discussion of LA 50550, Sections 5.1.8 and 6.2.6). Collected or bulldozed sites cannot be deleted from mitigation programs, as they constitute a large (and annually increasing) proportion of the total archaeological resource base in the region.

Finally, depositional and informant data indicate the possible presence of structural sites, completely buried by valley bottom alluvium and numbering perhaps ten or more. Testing sufficient to determine the reliability of informant data and character of all these sites is indicated prior to the design of mitigation programs or final assignment of mitigative priority to other, better known sites.

Data recovery for Archaic and other scatter sites is more straightforward; testing should entail controlled surface collection and extensive auger or pit testing depending on the substrate, to determine deposition, followed either by feature excavation or shallow shovel-scraper screening, depending on the success of feature discovery and on the depositional and spatial integrity of the remains encountered. Fully deflated sites should be considered mitigated by collection and test pit excavation.

Data recovery for historical sites in general entails historical, primarily archival, research augmented where appropriate by controlled surface collection for chronological verification, followed, if necessary, by limited testing in disposal features in order to recover economic and subsistence data.

Two rockshelter sites (LA 53482 and LA 53494) require testing to determine if culturally significant deposits are present. If such is the case, both will require total excavation.

It is considered that isolates are sufficiently mitigated by recording; no further work is suggested for isolates recorded in the course of this study.

Recommended Strategies. Although some additional testing is indicated for several sites prior to full data recovery, enough is known at present to permit the recommendation of specific data-recovery strategies for known Mogollon structural sites, historical sites, and scatter sites. For the rockshelter sites, the possible multicomponent lookout or shrine site (LA 53479), the bulldozed site (LA 50550), the two "buried" sites already reported (LA 53488 and LA 53489), and the ten or so "buried" sites suspected to exist but as yet unverified, further testing is required prior to the proposal of any mitigation plans or the advancement of a complete set of priorities for the study of all sites within the project area. It is recommended also that the strategies adopted allocate data recovery effort in a manner consistent with the degree, directness, and certainty of impact.

Recommended Strategies for Mogollon Components. It is possible to provide relatively reliable field time estimates for the eventual mitigation of only a few prehistoric sites: LA 50547, LA 50548, LA 53480, LA 53483, and the structural component of LA 53490. These estimates are detailed in Table 10.3. It should be emphasized that these estimates assume total destruction of extremely significant cultural resources and therefore, reflect intensive and complete data recovery as detailed in this section. In practice, as the level of impact to each resource is made explicit, appropriate thematic sampling procedures may be designed to reduce the effort-intensity estimates presented here.

Data recovery for directly impacted structural Mogollon (Table 10.3) components should entail, in sequence:

- auger or test pit evaluation for structures not yet tested,
- total site surface collection and exact mapping, including elevational mapping,
- total excavation of all known structural features,
- hand trenching through all structural feature walls, with stratigraphic recording sufficient to allow evaluation of stratigraphic linkages both between these features and also between them and extramural features,
- excavation of at least 10% of the surface area of known non-structural features (pavements, cleared areas, middens), and finally,
- total blading of the site to reveal hidden storage pits, cists, burials, and earlier pithouses, all of which should be treated as detailed above.

Field crews should make every effort to recover all ethnobotanical, dendrochronological, radiocarbon, faunal, thermoluminescence, and archaeomagnetic samples encountered. All suitable samples should be analyzed. In the event that depositional integrity of a structural Mogollon site is questionable, suitable auger testing should precede further work.

Table 10.3 Prehistoric Structural Site Mitigation: Field Time Estimates in Person Days (pd) by Task, Cuchillo Assessment Study, ACOE, 1986

Site	Map Time (pd)	Sample										Blade Monitoring Time (pd)	Total Time (pd)				
		Total Excavation:		Excavation:		Other		Features		Surface Collection				50cm wide Profile Trenching			
		Structures		Area		Time		Area		Time				Length		Time	
		(m ²)	(pd)	(m ²)	(pd)	(m ²)	(pd)	(m ²)	(pd)	(m)	(pd)			(m)	(pd)		
LA 50547	0.5	20.0	20.0	5.0	2.0	200.0	0.6	10.0	2.5	1.0	26.5						
LA 50548	3.0	194.0	426.8	115.0	46.0	7910.0	22.6	100.0	50.0	2.0	550.4						
LA 53480	0.5	20.0	20.0	5.0	2.0	180.0	0.6	10.0	2.5	1.0	26.6						
LA 53483	2.0	82.0	82.0	10.0	4.0	1000.0	2.9	90.0	45.0	2.0	137.9						
LA 53490 (Provenience A only)	1.0	40.0	40.0	10.0	4.0	750.0	2.2	25.0	12.5	1.0	60.7						

NOTE: Calculations assume:

- Average structure exterior pit of 20cm depth,
- Average structure interior pit of 50cm depth,
- Average subterranean structure pit of 150cm depth, and
- Average total productivity of:
 - 0.50m³ per person day excavation
 - 350m² collection per person day
 - 4m of trenching per person day

Recommended Strategies for Artifact Scatter Sites. Data recovery for endangered artifact scatter sites should entail, in sequence:

- total or large (25%) sample surface collection, depending on overall population size, with in-field distribution analysis,
- auger testing of areas exhibiting burned materials, ash, or possible deep deposits, or test pit excavation where substrates cannot be augered, followed by
- test pit excavation to verify features or cultural deposits, should these be found.

Depending on the results of tests:

- deflated sites should be considered mitigated,
- very shallow sites having some aeolian or fine alluvial cap should be partially (25%) shovel-scraped with screening to augment surface collection sample fractions, and
- all deep cultural deposits or features should be excavated. Also, in the event that stratigraphic information is preserved, shovel trenching should be used to recover it and thus to link features.

As with structural Mogollon sites, all environmental, adaptational, or chronometric samples encountered should be collected.

Recommended Strategies for Historical Sites. Data recovery for known historical sites (Table 10.4) should entail:

- archival verification or determination of site identity, layout, original ownership, and age, followed by
- limited surface collection both to verify occupancy duration and also to assay materials discarded, where warranted, and
- sampling excavations in refuse deposits to recover subsistence data, where warranted.

These last steps should be taken only if archival and/or surface indications suggest that deposited trash will be unambiguously assignable to a specific occupational period or episode.

Recommended Strategies for Sites with Currently Insufficient Data. Sites for which insufficient information is available to suggest mitigative strategies will typically require various testing treatments. Strategies for accomplishing this are detailed by site or site type (Table 10.5).

Rockshelter sites LA 53482 and LA 53494 should be tested by the installation of no more than three test pits per site, to be located in areas of highest apparent depositional integrity. Careful excavation procedures should be employed, as is always indicated in shelter sites.

The possible prehistoric shrine or lookout site (LA 53479) should be tested by disassembly and documentation of the most intact portion of the possible structure, with limited excavation should deposits be encountered.

The bulldozed Mogollon site (LA 50550) should be extensively auger tested, with test pit installation to verify any cultural deposits encountered. Augering should be sufficiently intensive to permit the discovery of burials, pithouses, or other filled subsurface features.

Table 10.4 Historical Site Mitigation: Best Case Field/Archival Time Estimates in Person Days by Task ^{1/}, Cuchillo Assessment Study, ACOE, 1986

Site	Archival/Interview Time	Surface ^{2/} Collection Field Time (if required)	Total Time if Sample Surface Collection is Indicated
LA 50549	completed	none	0
LA 53481	1.0	none	1
LA 53484 (stage stop component)	insufficient data	insufficient data	insufficient data
LA 53484 (homestead component)	0.5	none	0.5
LA 53487	1.0	1.0	2.0
LA 53491	1.5	2.0	3.5
LA 53492	1.0	1.0	2.0
LA 53493	1.0	1.0	2.0

^{1/} assumes no cases where excavation is indicated by archival and surface study

^{2/} @ 100 m² per person day

Table 10.5 Recommendations for Further Testing: Best Case 1/, 2/ Field/Archival Time Estimates By Task (in Person Days), Cuchillo Assessment Study, ACOE, 1986

Site	Site Type	Recommended Testing	Effort (person days)
LA 50550	Bulldozed Mogollon large site	100 auger tests <u>1/</u>	4.0
LA 53479	Possible shrine	Partial disassembly <u>1/</u>	1.0
LA 53482	Rock shelter	3 test pits <u>1/</u>	4.0
LA 53494	Rock shelter	3 test pits <u>1/</u>	4.0
LA 53484	Stage stop component	Archival work 50 auger tests <u>2/</u>	4.0
LA 53485	Archaic scatter	Collection of 625m ² (25%) 8 test pits <u>1/</u> (shallow) Shovel scraping <u>1/</u>	14.0
LA 53486	Mogollon scatter	Collection of 100m ² 6 test pits (2 already dug) <u>1/</u> Shovel scraping <u>1/</u>	4.5
LA 53488	Lightly tested possible Mogollon structure	Reinterview w/Ms. Mitchell 3 test pits (3 already dug)	3.25
LA 53489 and others	Untested, possibly buried Mogollon structures	Reinterview w/Ms. Mitchell 6 test pits <u>1/</u> (deep)	8.25 per site or reported site

1/ Assumes no deposition encountered

2/ Assumes results of archival work imply no need to trench, and all auger holes expended.

Features composing the stagestop component of site LA 53484 should be relocated by archival or interview research and verified by auger testing, with emphasis placed on the relocation of foundations, privies, and dumps. Existence, depth, and condition of any such features encountered should be further verified and evaluated by the installation of test pits. Care should be taken to assess impacts due to a reported episode of bulldozing, and to evaluate potential quality of geomorphological information implied by the depth, sequence, and character of postabandonment deposits.

Initial assessment of sites LA 53488, LA 53489, and any other suspected buried sites should be carried out by:

- intensive on-site informant interviews to determine the probable location and character of structures, features, and deposits,
- test pit installation of a depth and dispersion sufficient to verify or dismiss suspected cultural deposition, and
- if indicated, extensive backhoe trenching to determine the extent of cultural deposits. In these sites, hand and mechanical excavations should be terminated wherever features or ecologically rich deposits are encountered, as these are best excavated as a part of the final data recovery program. An exception should be made wherever ceramic associations or architecture appear to indicate the presence of an occupation chronologically or architecturally different from the known study area sites. In such cases, hand excavation should be directed at the recovery of chronometric samples, which should be processed immediately. Results of dating analyses should be used to guide the selection of sites for full mitigation, should it be the case that not all impacted pre-historic sites are to be mitigated (refer to Sections 10.3 and 10.4 for relevant discussions of priorities).

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ERRATUM

Please insert after Wilson, John P. Page 102 of Section 11.0 LITERATURE CITED:

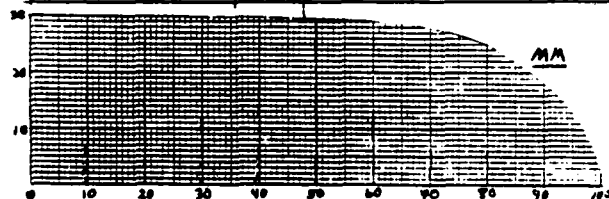
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APPENDIX A

Artifact Recordation Forms,
Cuchillo Assessment Survey, ACOE, 1986

PROJECT	SITE	SAMPLE	DATE	RECORDER
MATERIAL TEXTURE	DEBIT	PORTION	LxWxT	FLAKE CORTEX PLATFORM #UTIL # RETCH
	TYPE		TYPE	TYPE

[illegible]

SITE NO _____ PROVENIENCE _____ RECORDER _____ DATE _____

CERAMIC TYPE	VESSEL FORM FREQS			CERAMIC TYPE	VESSEL FORM FREQS		
	I	B	J		I	B	J
001 MOGOLLON R/BR	—	—	—	051 FUGITIVE REDWARE	—	—	—
002 3 CIRCLE R/W	—	—	—	052 SAN FRANCISCO RED	—	—	—
003 3 CIRCLE/BOLDFACE B/W	—	—	—	053 OTHER REDWARE	—	—	—
004 BOLDFACE B/W I	—	—	—	054 SALADO REDWARE	—	—	—
005 BOLDFACE/TRANSIT B/W	—	—	—	055 PLAYAS RED	—	—	—
006 TRANSITIONAL B/W II	—	—	—	059 INDENT RED	—	—	—
007 TRANSIT/CLASSIC B/W	—	—	—				
008 CLASSIC B/W III	—	—	—	060 PLAIN BROWNWARE	—	—	—
009 CLASSIC POLYCHROME	—	—	—	061 SMUDGED/POLISHED	—	—	—
010 INDET MIMBRES WHITEWARE	—	—	—	062 UNSMUDGED/WELL POL.	—	—	—
KANA'S/SAN MARCIAL	—	—	—				
011 SOCORRO B/W	—	—	—	065 INCISED BROWNWARE	—	—	—
012 CHUPADERO B/W	—	—	—	066 PUNCHED BROWNWARE	—	—	—
013 TABIRA B/W	—	—	—	067 SCORED BROWNWARE	—	—	—
				068 APPLIED BROWNWARE	—	—	—
016 RED MESA B/W	—	—	—	069 UNIDEN TEXT BROWNWARE	—	—	—
017 PUERCO B/W	—	—	—				
018 RESERVE B/W	—	—	—	070 ALMA NECKBANDED	—	—	—
019 TULAROSA B/W	—	—	—	071 CLAPBOARD CORRUG. BROWN	—	—	—
020 UNIDEN CIBOLA WHITEWARE	—	—	—	072 SMUDGED INTERIOR	—	—	—
				073 SMUDGED/FLATTENED	—	—	—
021 PUERCO B/R	—	—	—	074 FLATTENED CORRUG	—	—	—
022 WINGATE B/R	—	—	—	075 SHEARED RELIEF CORRUG	—	—	—
023 WINGATE POLYCHROME	—	—	—	076 PUNCHED CORRUGATED	—	—	—
024 ST JOHNS B/R	—	—	—	077 INCISED CORRUGATED	—	—	—
025 ST JOHNS POLYCHROME	—	—	—	078 CLAPBOARD/INDENT CORRUG	—	—	—
026 HESOTA B/R	—	—	—	079 INDENTED CORRUGATED	—	—	—
027 HESOTA POLYCHROME	—	—	—	080 SMUDGED/INDENT CORRUG	—	—	—
028 KWAKINA POLYCHROME	—	—	—	081 INCISED/INDENT CORRUG	—	—	—
029 UNIDEN WT MT REDWARE	—	—	—	082 OBLITERATED CORRUGATED	—	—	—
				083 SECO CORRUGATED	—	—	—
031 GILA POLYCHROME	—	—	—				
032 EL PASO POLYCHROME	—	—	—	085 RESERVE PUNCHED CORRUG	—	—	—
033 LINCOLN B/R	—	—	—				
034 SAN ANDRES R/T-C	—	—	—	090 EL PASO PLAIN BROWN	—	—	—
035 3 RIVERS R/T-C	—	—	—				
036 JORNADA R/BR	—	—	—	092 PLAIN GRAYWARE	—	—	—
037 JORNADA B/BR	—	—	—	093 CORRUGATED GRAYWARE	—	—	—
038 JORNADA POLYCHROME	—	—	—	094 INDENT CORRUG GRAYWARE	—	—	—
039 BABICORA POLYCHROME	—	—	—	096 UNIDEN PLAINWARE	—	—	—
040 RAMOS POLYCHROME	—	—	—				
041 UNIDEN CASAS GRANDES POLY	—	—	—	099 UNIDEN WARE	—	—	—
042 RIO GRANDE GLAZE A	—	—	—				
046 UNIDEN RIO GRANDE GLAZE	—	—	—				
047 UNIDEN RIO GR MATTE PT	—	—	—				
048 UNIDEN WHITEWARE	—	—	—				
TOTAL PAINTED	—	—	—	TOTAL PLAIN	—	—	—
EST NO OF VESSELS	—	—	—	EST NO OF VESSELS	—	—	—
(SURVEY ONLY)	—	—	—	(SURVEY ONLY)	—	—	—

GRAND TOTAL OF SHERDS _____

OF CHIPPED STONE _____

HISTORIC ARTIFACT FORM

Site # _____

Date _____

Sample Fraction _____

Recorder _____

#	Item	Type	Contents	Design	Age
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

SKETCH

APPENDIX B

Observed and Estimated Artifact Surface
Densities and Counts by Artifact
Class, Cuchillo Assessment Study,
ACOE, 1986

Appendix B: Observed and Estimated Artifact Surface Densities and Counts by Artifact Class, Orchardlo Assessment Survey, AOEE, 1986

Mariah Site #	LA Site #	Site Area m ²	Sample Fraction	Chipped Stone		Ground Stone		Prehistoric		Historic		Metal	Glass	Project Total			
				Debitage Tools and Cores		Tools		Ceramics		Ceramics				Surface Items			
				Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Total x/m ²	Per site	
1	53479	60	1	5	0.08	0	0	0	0	0	0	0	X	X	5		
2	50548	5000	.25	35	0.03	1	t	0	t	34	0.01	0	0	0	175		
3	53480	200	1	4	0.02	1	0.01	0	0	6	0.03	0	0	0	11		
4	53481	200	1	0	0	0	0	0	0	0	0	0	0	0	0		
5	53482	18	1	1	0	0	0	0	0	0	0	X	X	X	0		
6	53483	2000	.3	16	0.03	4	t	1	t	11	0.01	0	0	0	70		
7	50549	4	1	0	0	0	0	0	0	0	0	0	0	0	0		
8	50550	2000	.25	15	0.03	6	t	2	t	27	0.01	0	0	0	95		
9	50547	250	1	27	0.11	2	0.01	1	t	5	0.02	0	0	0	35		
10	53484	20000	1	0	0	0	0	0	0	0	0	X	X	X	A		
11	53485	2700	.03	37	0.45	3	t	0	0	0	0	0	0	0	300 1/		
12	53486	400	1	24*	0.06*	4*	0.01*	1*	t*	7*	0	0	0	0	29		
13	53487	8000	.05	0	0	0	0	0	0	0	12	0.03	76	0.19	133	0.33	
14	53488	200	.25	36	0.72	5	0.02	0	0	1	0.01	0	0	0	150		
15	53489	700	1	27	0.04	5	0.01	2	t	7	0.01	0	0	0	41		
16	53490	4500	1	35	0.01	8	t	0	0	5	t	0	0	0	48		
17	53491	2500	A	1	t	0	0	0	0	1	t	A	A	A	A		
18	53492	12000	.01	0	0	0	0	0	0	0	0	16	0.13	128	1.07	63	0.52
19	53493	5000	.01	0	0	0	0	0	0	0	0	33	0.70	90	1.80	350	7.0
20	53494	40	1	0	0	0	0	0	0	0	0	0	0	X	0	0	

Key: 1/ = # artifacts estimated in field
x/m² = mean estimated density per m²
t = trace frequencies only
A = density data not systematically collected - visual estimates only
X = only fully modern items (Post-1945)
* = recently collected by local residents

APPENDIX C

Lithic Analysis of Surface Monitored and Excavated Lithic Artifacts, Cuchillo Assessment Study, ACOE, 1986

- C.1 Estimated Percentage of Cortex for Surface Debitage
 - C.1.1 Estimated Percentage of Cortex for Excavated Debitage
- C.2 Surface Debitage Summary
 - C.2.1 Excavated Debitage Summary
- C.3 Surface Debitage Utilization/Retouch
 - C.3.1 Excavated Debitage Utilization/Retouch
- C.4 Thickness (millimeters) of Complete Surface Monitored Flakes
 - C.4.1 Thickness (millimeters) of Complete Excavated Flakes
- C.5 Surface Debitage Totals by Material Type
 - C.5.1 Excavated Surface Debitage Totals by Material Type
- C.6 Surface Monitored Lithic Tools
 - C.6.1 Excavated Lithic Tools
- C.7 Diagnostic Lithic Artifacts

Appendix C.1: Estimated Percentage of Cortex for Surface Debitage, Cuchillo
Assessment Study, ACOE, 1986

Site	0%	1 - 30%	31% - 70%	71% - 100%	TOTAL
50549	21	6	0	0	27
50548	19	13	1	2	35
50550	12	1	2	0	15
53479	2	3	0	0	5
53480	2	1	1	0	4
53483	10	4	1	1	16
53485	31	2	2	2	37
53486	20	2	0	2	24
53488	28	3	3	2	36
53489	17	5	3	2	27
53490	21	8	3	3	35

Appendix C.1.1: Estimated Percentage of Dorsal Cortex for Excavated Debitage,
Cuchillo Assessment Study, ACOE, 1986

Site	Provenience	Level	0%	1 - 30%	31 - 70%	71 - 100%	TOTAL
LA 53483	Pit D	0	0	0	1	0	1
		1	1	2	0	0	3
LA 53483 OVERALL		TOTAL	1	2	1	0	4
LA 50547	Pit A	0	1	0	0	0	1
		1	10	2	6	1	19
		2	6	6	3	2	17
		3	5	5	3	4	17
		4	1	0	0	1	2
	Pit A	Total	23	13	12	8	56
LA 50547	Pit B	1	15	4	2	0	21
		2	3	1	2	0	6
		3	1	0	0	0	1
	Pit B	Total	19	5	4	0	28
LA 50547 OVERALL		TOTAL	42	18	16	8	84
LA 50548	Pit I	1	2	1	0	0	3
		2	1	0	1	1	3
		3	1	1	0	0	2
		5	2	0	0	0	2
		6	3	2	0	1	6
		7	1	1	0	0	2
		9	3	0	0	0	3
		10	1	0	0	1	2
		11	4	1	0	1	6
		12	2	1	0	1	4
		13	3	0	0	0	3
	Pit I	Total	23	7	1	5	36
LA 50548	Pit A	2	4	1	2	0	7
		3	14	2	2	2	20
		4	5	2	1	7	15
		5	16	3	1	2	22
		6	14	4	1	2	21
		7	12	3	2	4	21
		8	13	4	1	2	20
		9	8	2	2	2	14
		10	2	0	0	1	3
		12	1	0	0	0	1
		13	3	0	1	0	4
		14	1	1	1	0	3
	Pit A	Total	93	22	14	22	151
LA 50548	Pit B	3	0	1	1	0	2
		4	1	0	0	0	1
		5	1	1	0	1	3
		6	2	0	0	0	2
	Pit B	Total	4	2	1	1	8
LA 50548 OVERALL		TOTAL	120	31	16	28	195
LA 53488		Pit B	1	3	1	0	6
TOTALS			166	52	33	38	289

Appendix C.2: Surface Debitage Summary, Cuchillo Assessment Study, ACOE, 1986

Site	<u>Total Flakes</u>				<u>Total other Debitage</u>		Total all Debitage
	Core	Blade	Biface	Unknown	Angular	Bipolar	
50547	20	0	0	0	7	0	27
50548	26	0	0	0	9	0	35
50550	9	4	0	1	1	0	15
53479	3	0	0	0	2	0	5
53480	3	0	0	0	1	0	4
53483	14	1	0	0	1	0	16
53485	21	8	2	0	6	0	37
53486	20	3	1	0	0	0	24
53488	29	0	1	0	6	0	36
53489	23	0	0	0	4	0	27
53490	26	4	1	0	4	0	35

Appendix C.2.1: Excavated Debitage Summary, Cuchillo Assessment Study, ACOE, 1986

Site	Provenience	Total Flakes				Total other Debitage		Total all Debitage
		Core	Blade	Biface	Unknown	Angular	Bipolar	
LA 53483	Pit D Levels 0-1	3	0	0	0	1	0	4
LA 50547	Pit A							
	Level 0	1	0	0	0	0	0	1
	Level 1	13	1	0	0	4	1	19
	Level 2	8	0	0	0	5	4	17
	Level 3	11	0	0	0	2	4	17
	Level 4	1	0	0	0	0	1	2
TOTAL PIT A		34	1	0	0	11	10	56
	Pit B							
	Level 1	14	2	0	1	4	0	21
	Level 2	3	1	0	0	2	0	6
	Level 3	1	0	0	0	0	0	1
TOTAL PIT B		18	3	0	1	6	0	28
LA 50547 OVERALL TOTAL		52	4	0	1	17	10	84
LA 50548	Pit I							
	Level 1	1	0	0	2	0	0	3
	Level 2	2	0	0	0	1	0	3
	Level 3	0	2	0	0	0	0	2
	Level 5	0	2	0	0	0	0	2
	Level 6	6	0	0	0	0	0	6
	Level 7	1	0	0	0	1	0	2
	Level 9	2	0	0	0	1	0	3
	Level 10	1	0	0	0	1	0	2
	Level 11	3	1	0	0	2	0	6
	Level 12	2	0	0	0	2	0	4
	Level 13	1	1	0	0	1	0	3
TOTAL PIT I		19	6	0	2	9	0	36

Appendix C.2.1 (continued)

Site	Provenience	Total Flakes				Total other Debitage		Total all Debitage
		Core	Blade	Biface	Unknown	Angular	Bipolar	
LA 50548	Pit A							
	Level 1*	0	0	0	0	0	0	0
	Level 2	4	0	0	0	2	1	7
	Level 3	8	3	0	2	5	2	20
	Level 4	7	1	0	1	6	0	15
	Level 5	12	0	1	2	6	1	22
	Level 6	12	0	2	3	4	0	21
	Level 7	11	0	1	4	4	1	21
	Level 8	9	1	0	3	7	0	20
	Level 9	4	0	3	0	7	0	14
	Level 10	1	0	1	1	0	0	3
	Level 12	0	0	0	0	1	0	1
	Level 13	2	1	1	0	0	0	4
	Level 14	3	0	0	0	0	0	3
TOTAL PIT A		73	6	9	16	42	5	151
	Pit B							
	Level 3	1	0	0	0	0	1	2
	Level 4	0	0	0	1	0	0	1
	Level 5	2	0	0	0	1	0	3
	Level 6	0	0	0	1	1	0	2
TOTAL PIT B		3	0	0	2	2	1	8
LA 50548 OVERALL TOTAL		95	12	9	20	53	6	195
LA 53488	Pit B							
	Level 1	4	0	0	0	2	0	6
GRAND TOTAL		154	16	9	21	73	16	289

Note:

*artifacts missing

Appendix C.3 Surface Debitage, Utilization/Retouch, Cuchillo Assessment
Study, ACOE, 1986

MODIFIED EDGES

<u>Site</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>Total</u>
50547	24	3	0	3/27
50548	29	5	1	6/35
50550	12	2	1	3/15
53479	2	2	1	3/5
53480	4	0	0	0/4
53483	14	2	0	2/16
53485	35	2	0	2/37
53486	23	1	0	1/24
53488	31	5	0	5/36
53489	23	4	0	4/27
53490	26	9	0	9/35
TOTALS	223	35	3	38/261

Appendix C.3.1: Excavated Debitage Utilization/Retouch, Cuchillo Assessment Study, ACOE, 1986

LOCATION			# MODIFIED EDGES					
Site	Provenience	Level	0	1	2	3	4 or more	Total
LA 53483	Pit D	0	1	0	0	0	0	1
		1	1	1	1	0	0	3
TOTAL LA 53483			2	1	1	0	0	4
LA 50547	Pit A	0	1	0	0	0	0	1
		1	11	3	0	3	1	18
		2	13	4	0	1	0	18
		3	14	1	1	0	1	17
		4	2	0	0	0	0	2
TOTAL PIT A			41	8	1	4	2	56
LA 50547	Pit B	1	14	5	2	0	0	21
		2	4	1	1	0	0	6
		3	0	1	0	0	0	1
TOTAL PIT B			18	7	3	0	0	28
LA 50547 OVERALL TOTAL			59	15	4	4	2	84
LA 50548	Pit I	1	0	2	1	0	0	3
		2	0	3	0	0	0	3
		3	1	0	1	0	0	2
		5	0	1	1	0	0	2
		6	2	3	0	1	0	6
		7	1	1	0	0	0	2
		9	2	1	0	0	0	3
		10	1	1	0	0	0	2
		11	4	1	0	1	0	6
		12	2	0	2	0	0	4
		13	0	3	0	0	0	3
		TOTAL PIT I			13	16	5	2

Appendix C.3.1: (continued)

LOCATION			# MODIFIED EDGES					
Site	Provenience	Level	0	1	2	3	4 or more	Total
LA 50548	Pit A	2	6	0	1	0	0	7
		3	12	4	3	1	0	20
		4	7	3	4	1	0	15
		5	15	6	1	0	0	22
		6	14	4	2	0	1	21
		7	13	7	0	1	0	21
		8	13	4	3	0	0	20
		9	12	2	0	0	0	14
		10	1	1	1	0	0	3
		12	1	0	0	0	0	1
		13	3	0	0	1	0	4
		14	2	1	0	0	0	3
TOTAL PIT A			99	32	15	4	1	151
LA 50548	Pit B	3	0	1	1	0	0	2
		4	1	0	0	0	0	1
		5	2	1	0	0	0	3
		6	2	0	0	0	0	2
TOTAL PIT B			5	2	1	0	0	8
LA 50548 OVERALL TOTAL			117	50	21	6	1	195
LA 53488	Pit B	1	3	2	1	0	0	6
GRAND TOTAL			181	68	27	10	3	289

Appendix C.4 Thickness (Millimeters) of Complete Surface Monitored Flakes,
Cuchillo Assessment Study, ACOE, 1986

Site	0 < T ≤ 1	1 < T ≤ 3	3 < T ≤ 6	6 < T ≤ 12	12 < T	Total
50547	0	2	6	7	5	20
50548	0	1	8	8	9	26
50550	0	0	0	5	2	7
53479	0	0	0	3	0	3
53480	0	0	0	3	0	3
53483	0	0	4	6	2	12
53485	0	3	8	4	3	18
53486	0	3	9	4	6	22
53488	0	0	3	7	6	16
53489	0	1	9	7	4	21
53490	0	1	10	6	4	21

Appendix C.4.1: Thickness (Millimeters) of Complete Excavated Flakes, Cuchillo Assessment Study, ACOE, 1986

Site	Provenience	Level	0< T≤ 1	1< T≤ 3	3< T≤ 6	6< T≤ 12	12< T	Total
LA 53483	Pit D	0	0	0	0	1	0	1
		1	0	0	1	1	0	2
TOTAL LA 53483			0	0	1	2	0	3
LA 50547	Pit A	0	0	0	0	0	1	1
		1	0	4	4	4	2	14
		2	0	2	2	1	2	7
		3	1	0	6	0	0	7
		4	0	0	0	0	0	0
TOTAL PIT A			1	6	12	5	5	29
LA 50547	Pit B	1	0	1	4	7	2	14
		2	0	0	1	2	0	3
		3	0	0	1	0	0	1
TOTAL PIT B			0	1	6	9	2	18
LA 50547 OVERALL TOTAL			1	7	18	14	7	47
LA 50548	Pit I	1	0	0	0	1	0	1
		2	0	0	1	0	1	2
		3	0	0	0	2	0	2
		5	0	0	1	0	0	1
		6	0	0	1	4	0	5
		7	0	0	0	1	0	1
		9	0	0	0	1	0	1
		10	0	0	1	0	0	1
		11	0	0	1	2	1	4
		12	0	1	0	0	1	2
		13	0	0	0	0	2	2
TOTAL PIT I			0	1	5	11	5	22
LA 50548	Pit A	2	0	0	1	1	0	2
		3	0	3	5	4	0	12
		4	0	1	4	2	0	7
		5	0	7	3	1	0	11
		6	1	3	6	2	0	12
		7	1	1	4	6	1	13
		8	0	3	3	1	2	9
		9	0	2	1	0	1	4
		10	0	1	1	0	0	2
		13	1	0	1	2	0	4
		14	0	1	0	1	1	3
TOTAL PIT A			3	22	29	20	5	79

Appendix C.4.1 (continued)

Site	Provenience	Level	0<T≤1	1<T≤3	3<T≤6	6<T≤12	12<T	Total
LA 50548	Pit B	3	0	1	0	0	0	1
		5	0	0	1	0	1	2
TOTAL PIT B			0	1	1	0	1	3
LA 50548 OVERALL TOTAL			3	24	35	31	11	104
LA 53488	Pit B	1	0	0	1	3	0	4

Appendix C.5: Surface Debitage Totals By Material Type, Cuchillo Assessment
Study, ACOE, 1986

LA 5047

2 Brown chert
3 Brown siltstone
1 Siltstone
9 Grey chert
6 Red chert
3 White chert
2 Banded chert
1 Tan chert
27

LA 50548

3 White chert
2 Brown chert
10 Red chert
13 Grey chert
1 Black chert
1 Siltstone
4 Basalt
1 Obsidian
35

LA 50550

1 Basalt
1 Siltstone
1 Chalcedony
5 Chert
5 Red chert
5 Grey chert
18

LA 53479

2 Grey chert
2 White chert
1 Limestone
5

LA 53480

1 Black chert
1 Brown chert
1 Brown siltstone
1 Red siltstone
4

LA 53483

4 Banded chert
2 White chert
2 Rhyolite
2 Brown siltstone
1 Basalt
1 Chert
1 Banded siltstone
1 Brown chert
1 Siltstone
1 Red chert
16

LA 53485

8 White chalcedony
2 Banded chert
5 Brown chert
7 White chert
1 Brown silicified wood
1 Black chalcedony
1 Tan chert
3 Red siltstone
1 Pink chert
1 Pink metamorphosed shale
1 Basalt
1 Mottled chert
1 Grey chert
33

LA 53486

1 Rhyolite
1 Red chert
1 Red siltstone
7 White chalcedony
4 White chert
6 Brown chert
1 Clear chalcedony
2 Grey chert
1 Mottled chert
24

LA 53488

3 Siltstone
2 Limestone
1 Basalt
1 Andesite
1 Chalcedony
26 Chert
2 Grey chert
36

LA 53489

5 Andesite
5 Siltstone
15 Chert
1 Rhyolite
1 Chalcedony
27

LA 53490

3 Andesite
3 Siltstone
4 Rhyolite
6 Chalcedony
15 Chert
2 Grey chert
2 Basalt
35

Appendix C.5.1: Excavated Debitage Totals by Material Type, Cuchillo
Assessment Study, ACOE, 1986

LA 50547, Pit A

25 Banded chert
12 Grey chert
5 Red chert
4 Brown chert
3 Tan chert
2 Metamorphosed mudstone
1 Siltstone
1 Chert
1 Quartzite
1 Obsidian
1 White chalcedony
56

LA 50547, Pit B

8 Banded chert
6 Grey chert
5 Tan chert
3 Chert
2 Black rhyolite
2 Quartzite
1 Tan rhyolite
1 White chalcedony
28

LA 50548, Pit I

9 Banded chert
7 Grey chert
3 Brown chert
3 Tan chert
2 Red chert
2 Grey siltstone
2 Grey quartzite
1 Mottled chert
1 Grey rhyolite
1 Black rhyolite
1 Rhyolite
1 White chert
1 Black basalt
1 Brown quartzite
1 Mottled quartzite
36

LA 50548, Pit A

33 Grey chert
20 Banded chert
19 Tan chert
10 White chert
7 Grey quartzite
7 Obsidian
6 Chert
5 Clear chalcedony
4 Brown chert
4 Red chert
4 Brown quartzite
4 Grey basalt
3 Tan quartzite
3 Grey metamorphosed mudstone
3 Metamorphosed mudstone
3 Quartzite
3 Rhyolite
2 Brown chert
1 Brown silicified wood
1 Pink chert
1 Rhyolite
1 Black chert
1 Grey chalcedony
1 Mottled quartzite
1 Chalcedony
1 Black vitrophyre
1 Yellow chalcedony
1 Red quartzite
1 White chalcedony
151

LA 50548, Pit B

3 Chert
1 Grey chert
1 Banded chert
1 Tan chert
1 Grey basalt
1 Black chert
8

LA 53485, Pit D

2 Chert
1 Grey chert
1 Tan chert
4

LA 53488, Pit B

3 Banded chert
1 Chert
1 White chert
1 Grey rhyolite
6

Appendix C.6: Surface Monitored Lithic Tools and Cores, Cuchillo Assessment Study, ACOE, 1986

Site	Tool Type	Material/Color	Grain Texture	Portion	Core Type	Core Platform	Exhausted	Use Attribution
LA 50547	Core	Mottled Chert	-	-	Multifacet	Multiple	No	No
	Proj. Point*	White Chert (Burned)	Medium	● Haft & Blade	-	-	-	No
	Mano	Black Basalt	Coarse	Broken (●)	-	-	-	Yes
LA 50548	Proj. Point*	Mottled Chert	Fine	Tip missing	-	-	-	No
LA 50550	Core	Chert	Medium	-	Bidirectional	Single Removal	No	No
	Core	Grey Chert	-	-	Multifacet	Multiple	Yes	No
	Core	Basalt	-	-	Multifacet	Multiple	No	No
	Core	White Quartzite	-	-	Multifacet	Multiple	Yes	No
	Core	Basalt	-	-	Multifacet	Multiple	No	No
	Unifacial							
	Cobble Tool	Basalt	-	Whole	-	-	-	No
	Mortar*	Igneous	Coarse	Whole	-	-	-	Yes
	Metate	Rhyolite	Coarse	Broken	-	-	-	Yes
LA 53480	Core	Basalt	Coarse	-	Bidirectional	-	No	No
LA 53483	Proj. Point*	Brown Silicified Wood	Fine	Stem/Prox. Blade	-	-	-	Yes
	Core	Brown Chert	Medium	-	Multifacet	Multiple	No	No
	Core	White Chert	Medium	-	Multifacet	Multiple	Yes	No
	Mano	Basalt	Coarse	Whole	-	-	No	Yes
	Chopper	Andesite	-	Whole	-	-	No	Yes
LA 53485	Core	Brown Chert	Medium	-	Multifacet	Multiple	Yes	No
	Proj. Point*	Brown/Grey Chert	Fine	Whole	-	-	-	No
	Core	Mottled Chalcedony	Medium	-	Multifacet	Multiple	Yes	No
LA 53486	Core	Basalt	Medium	-	Multifacet	Multiple	No	Yes
	Core	Basalt	Medium	-	Unidirectional	Single	No	Yes
	Core	White Chert	Medium	-	-	-	No	No
	Core	Red Siltstone	Medium	-	Multifacet	Multiple	No	No
	Mano	Andesite	-	Whole	-	-	-	Yes

Appendix C.6: (continued)

Site	Tool Type	Material/Color	Grain Texture	Portion	Core Type	Core Platform	Exhausted	Use Attrition
LA 53488	Core	Limestone	Medium	-	Multifacet	Multiple	No	Yes
	Core	Chert	Medium	-	Bidirectional	Single	Yes	No
	Core	Rhyolite	Medium	-	Multifacet	Multiple	No	Yes
	Biface	Grey Chert	Fine	Broken	-	-	-	No
	Proj. Point*	Oxidized	Fine	Lateral Base Missing	-	-	-	No
LA 53489	Core	Andesite	Medium	-	Multifacet	Multiple	No	No
	Core	Chert	Coarse	-	Multifacet	Multiple	No	No
	Core	Andesite	Medium	-	Multifacet	Multiple	No	No
	Core	Chert	Coarse	-	Unidirectional	Cortical	No	No
	Metate	Sandstone	Coarse	Broken	-	-	-	Yes
	Scraper	Chert	Fine	Whole	-	-	-	Yes
	Mano	Andesite	-	Whole	-	-	-	Yes
LA 53490	<u>Provenience A</u>							
	Core	Rhyolite	Medium	-	Multifacet	Multiple	No	No
	Core	Chert	Medium	-	Multifacet	Multiple	No	No
	<u>Provenience B</u>							
	Core	Chert	Medium	-	Multifacet	Multiple	No	No
	Biface	Chalcedony	Fine	Broken	-	-	-	-
	Biface	Rhyolite	Medium	Broken	-	-	-	Yes
	Scraper*	Silicified Wood	Fine	Whole	-	-	-	Yes
	Denticulate	Chert	Medium	Whole	-	-	-	Yes
	Proj. Point*	Chert	Fine	Whole	-	-	-	-

*Collected

Appendix C-1: Excavated Lithic Tools and Cores, Ordullo Assessment Study, AOE, 1986

Site # and Provenience	Tool Type	Material/Color	Grain Texture	Portion	Core Type	Core Platform	Exhausted	Use: Attrition
50547-Pit 1 Core	Banded Chert Rhyolite		Medium Coarse	-	Pyramidal Bidirectional	Single	No	No
						Multiple	No	Yes
50548-Pit 1 Core	Grey/Brown Quartzite		Coarse	-	Multifacet	Cortical	Yes	Yes
50548-Pit 1 Biface Biface Biface Scraper Core Core	Chalcedony Obsidian Chert Chert Grey Chert Rhyolite?		Fine Glassy Fine Fine Medium Coarse	Tip Complete 3/4 Complete Complete - -	-	-	-	No
					-	-	-	No
					-	-	-	No
					-	-	-	Yes
					Multifacet	Cortical	Yes	No
					Bidirectional	Cortical (Multiple Remnants)	No	No
53488-Pit 1 Core	Mottled Chert Tan Chert		Fine Fine	- -	Bidirectional Bidirectional	Multiple	No	Yes
						Multiple	Yes	Yes

Appendix C.7: Diagnostic Lithic Artifacts



LA50548-A275



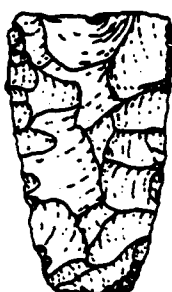
LA53488-A308



LA53485-A307



LA50547-A311



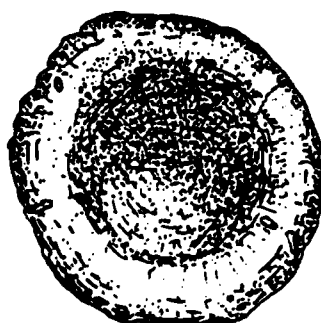
LA53483-A292



LA53490-A310



LA53490-A309



LA50550-A306



Appendix C.7: Diagnostic Lithic Artifacts (continued)

Projectile Point A-275

Material:	Chert
Color:	Mottled red, tan, brown
Shape:	Elongated triangular
X-Section:	Lenticular
Notching:	Small, shallow side notches
Base:	Convex
Blade:	Irregular/straight
Flaking:	Medial transverse/irregular
Grinding:	Absent
Cult. Assoc.:	San Pedro?
Temp. Affiliat.:	Late Archaic

L. 34 mm W. 17.7 mm TH. 4.9 mm
(Portion) Extreme tip missing (2 mm)
Comments: Tip exhibits hinge fracture.

Projectile Point A-308

Material:	Obsidian
Color:	Black
Shape:	Triangular
X-Section:	Flat/parallel
Notching:	Deep corner notches
Base:	Convex? (fragments)
Blade:	Irregular/straight
Flaking:	Nonpatterned
Grinding:	Absent
Cult. Assoc.:	En Medio?
Temp. Affiliat.:	Late Archaic/Early Ceramic

L. 27.8 mm W. 22.6 mm TH. 3.7 mm
(Portion) Base is fragmented.
Comments: Steep microstep edge retouch; Base exhibits spiral burination-possibly from twisting in haft.

Appendix C.7: (continued)

Projectile Point A-307

Material:	Chert
Color:	Brown/grey
Shape:	Elongated triangular
X-Section:	Biconvex
Notching:	Broad side notches
Base:	Convex
Blade:	Wave convex
Flaking:	Parallel oblique/medial transverse
Grinding:	Absent
Cult. Assoc.:	Unknown
Temp. Affiliat.:	Middle Archaic

L. 46.9 mm W. 20.5 mm TH. 6.6 mm

(Portion) Complete

Comments: Original flake bulb proximal, serrated effect from platform preparation.

Projectile Point A-311

Material:	Chert
Color:	White
Shape:	Irregular
X-Section:	Lenticular
Notching:	Broad side notch(es)
Base:	Slightly concave
Blade:	Irregular/straight
Flaking:	Nonpatterned (Bifacial)
Grinding:	Absent
Cult. Assoc.:	Unknown
Temp. Affiliat.:	Middle Archaic

L. 23 mm W. 13 mm TH. 3.8 mm

(Portion) Half of base and haft/proximal/lateral blade

Comments: Exhibits possible distal reworking; exhibits crazing and patina due to extreme heat.

Appendix C.7: (continued)

Projectile Point A-292

Material:	Silicified wood
Color:	Tan/brown
Shape:	Lanceolate
X-Section:	Lenticular/parallel
Notching:	N/A (Stemmed/lanceolate) constricting
Base:	Convex, thinned
Blade:	Expanding/straight
Flaking:	Parallel transverse with microedge retouch
Grinding:	Weak basal, lateral stem/haft
Cult. Assoc.:	Possibly Agate Basin variant (Milnesand)
Temp. Affiliat.:	Possible Paleo-Indian - Early Plano

L. 39.3 mm W. 23.2 mm TH. 5.8 mm

(Portion) Hafted portion of stem

Comments: Multiple scars on break indicate
splayed hinge and snap. Possible burin
use on snap (microstep fractures).

Projectile Point A-310

Material:	Chert
Color:	Purple/grey
Shape:	Elongated diamond (reworked)
X-Section:	Biconvex
Notching:	N/A (stemmed)
Base:	Rounded point
Blade:	Irregular/concave
Flaking:	Nonpatterned
Grinding:	Absent
Cult. Assoc.:	Pelona
Temp. Affiliat.:	Archaic

L. 27 mm W. 16 mm TH. 5.4 mm

(Portion) Complete

Comments: Reworked blade; socketed haft element.

Appendix C.7: (continued)

Scraper A-309

Material: Silicified wood (Tecovas-like, probably
Triassic)
Color: Brown/red
Shape: Plano-convex
Working Edge: Steep (40°), Dorsal oriented on flake
Attrition: Preparation = Shallow scalar scars: Use =
Steep step fractures and microscalar

L. 25 mm W. 12 mm TH. 7.8 mm

(Portion) Complete

Comments: Original flake platform and bulb
proximal; working edge distal and dor-
sal on flake. Moderate use attrition
(not exhausted); possible graver rem-
nant on working edge.

Mortar A-306

Material: Igneous (dense pumice or vesicular basalt)
Color: Red/grey
Shape: Round/bowl; natural flat bottom
Attrition: Hollowed bowl interior

Ext. Dia. 44 mm Int. Dia. 23 mm Interior Depth 15 mm
(Portion) Complete

Comments: Small mortar; use (specific) unknown;
grey tan deposits noted in bottom,
possibly clay or paint. Recommend che-
mical analysis of residue.

APPENDIX D

- D.1 Surface Monitored Ceramics by
Type and Site
- D.2 Excavated Monitored Ceramics by
Type and Site
- D.3 Surface Ceramics from the Nalda
Mitchell and Mariah Collections
by Site and Type

Appendix D.1 Surface Monitored Ceramics by Type and Site, Cuchillo Assessment Study, ACOE, 1986

Ceramic Type	LA #	50547	50548	50550	53480	53483	53486	53488	53489	53490	TOTAL
Decorated Wares											
Mimbres B/W:											
(I) Boldface				1							
(I/II)			4								4
(II) Transition				1		1					2
(II/III)				1							1
(III) Classic			2	1							3
Indet Mimbres			5	2		2			1		10
Socorro B/W						1					1
Chupadero B/W				1							1
Red Mesa B/W			1								1
Reserve B/W			5						1		6
White Mt. Redware					5						5
El Paso Poly.				1							1
Unid. Whiteware			1	4							5
San Francisco Red	1	1	1	1		1	1				5
Indet. Red				2		2		1			5
<u>BROWN WARE</u>											
Plain				1							1
Smudged/Polished				1							1
Unsmudged/Good Polish				1							1
Scored				2		1					3
Clapboard			4			2					6
Smudged Interior			3								3
Indented/Corr.									1		1
Oblit/Corr.					1					5	6
El Paso	4	7	6						2		19
Other Brown			1	1		1			2		5
TOTAL MIMBRES		0	11	6	0	3	0	0	1	0	21
TOTAL OTHER PAINTED		0	7	6	5	1	0	0	1	0	20
TOTAL RED		1	1	3	0	3	1	1	0	0	10
TOTAL BROWN		4	15	12	1	4	?	0	5	5	46
TOTAL SHERDS		5	34	27	6	11	1+	1	7	5	97+

[illegible][illegible]

Appendix D.2 (continued)

Ceramic Type	LA 50548													Pit A, 1.12	Pit A, 1.13	Pit A, 1.14	Pit A TOTAL	Pit B, 1.2	Pit B, 1.3	Pit B, 1.4	Pit B, 1.5	Pit B, 1.6	Pit B TOTAL	Pit I, 1.1	Pit I, 1.2	Pit I, 1.3	Pit I, 1.4	Pit I, 1.5	Pit I, 1.6	Pit I, 1.7	Pit I, 1.8	Pit I, 1.9	Pit I, 1.11	Pit I, 1.12	Pit I, 1.13	Pit I TOTAL
<u>DECORATED WARES</u>																																				
Mimbres Boldface B/W																																				
Mimbres Transtnl/Clsc B/W																																				
Indet. Mimbres Whiteware																																				
Chupadero B/W																																				
Indet. Whiteware																																				
Buffware or Whiteware																																				
San Francisco Red																																				
Indet. Red																																				
Indet. R/Br																																				
<u>PLAINWARES</u>																																				
Grayware																																				
Brownware:																																				
Plain	1																																			
Smudged/Flattened Corrug.	2	1	1																																	
Unsmudged/Well Polished	4	2																																		
Scored																																				
Clapboard																																				
Flattened/Corrug.																																				
Smeared Relief Corrug.																																				
Punched Corrug.																																				
Smudged/Flattened Corrug.																																				
Clapboard/Indet. Corrug.																																				
Incised																																				
Indet. Textured Brown																																				
Obliterated Corrug.																																				
TOTAL MIMBRES	0	0	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL OTHER PAINTED	0	0	0	11	0	1	0	0	0	1	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
TOTAL RED	0	0	0	10	0	1	0	0	0	1	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
TOTAL PLAIN BROWN	7	3	1	192	3	8	1	3	2	16	2	4	2	3	6	8	8	4	8	3	5	2	55													
TOTAL SHERDS	7	3	2	220	3	9	1	3	2	17	2	5	2	3	7	9	9	4	8	3	5	2	59													
MA #																																				
235F-2																																				

Total of excavated ceramics = 313

Appendix D.3 Surface Ceramics from the Nalda Mitchell and Mariah Collections,
by Site and Type, Cuchillo Assessment Study, ACOE, 1986

Ceramic Types	Nalda Mitchell Collection	53488	53483	50548	53486	50550	Mariah Collection	53480	53483	50550	50547	TOTAL
<u>DECORATED WARES</u>												
3 Circle R/W						1						1
Mimbres Boldface B/W			1									1
Mimbres Classic B/W			23	8	13	2						46
Indet. Mimbres Whiteware					1	1			1			3
Chupadero B/W				2	3							5
Tularosa B/W						1						1
Unid. Whiteware			2	1	1	3						7
San Francisco Red			1	3		1						5
St. John's B/R								1				1
Indet. Red			3	2	3	1						9
Mogollon R/Br			1									1
Carbon Paint B/W (T-or-C B/W or affinis Magdalena B/W)										1		1
<u>BROWN WARES</u>												
Plain		3	30	13	18	14					1	79
Smudged/Polished				4	1	3						8
Unsmudged/Well Polished		1	1		22	2						26
Scored			3		1	1						5
Clapboard			1	6	4							11
Flattened/Corrug.			3									3
Smearred Relief Corrug.			5	1								6
Punched Corrug.			2			1						3
Smudged/Flattened Corrug.				1								1
Clapboard/Indent. Corrug.			1									1
Incised				2	5							7
Obliterated Corrug.		1	6	1								8
TOTAL MIMBRES		0	24	8	14	4		0	1	0	0	51
TOTAL OTHER PAINTED		0	7	8	7	6		0	0	1	0	29
TOTAL RED		0	4	5	3	2		1	0	0	0	15
TOTAL PLAIN BROWN		5	46	22	53	25		0	0	0	1	152
TOTAL SHERDS		5	83	38	74	35		1	1	1	1	239
	NA #	235F-14	235F-6	235F-2	235F-12	235F-8		235F-3	235F-6	235F-8	235F-9	TOTAL

APPENDIX E

Historic Artifacts,
Cuchillo Assessment Study,
ACOE, 1986

Appendix E: Historic Artifacts, Cuchillo Assessment Study, ACOE, 1986

	LA 53487, Area 1	LA 53487, Area 2	LA 53492, Area 1	LA 53492, Area 2	LA 53493, Structure A	LA 53493, Structure B
<u>Metal containers</u>						
Food cans	2	4	47			1
Beverage cans	5		35		1	1
Tobacco cans	4	1			1	
Spray cans			2			
Misc. cans	15	6				1
Can lids	1		30			1
<u>Glass containers</u>						
Food/beverage bottle			2			
Cosmetic bottles			1			
Medicine bottles					1	
Twist cap bottles	1					
Clear jar w/screw top				1		
Ball jar lid				1		
Bottle caps						4
Unid. purple	25	2			1	4
brown	72	4				2
aqua	6					3
clear	10	2		4		
green		3				
milk			6			
white			50			
Red bottle			1			
<u>Ceramic containers</u>						
White glaze	7	2		15	3	
Whiteware, plain						21
Whiteware, decortd.						6
Chinaware						2
Milkware						19
Dark brown glazed cobalt						1

Appendix E: (continued)

	LA 53487, Area 1	LA 53487, Area 2	LA 53492, Area 1	LA 53492 Area 2	LA 53493, Structure A	LA 53493, Structure B
<u>Misc. metal</u>						
Horseshoe	1					2
Baling wire	4	7		1	5	3
Barbed wire	2			1		
Fencing wire grid				1		
Chicken wire				1		
Machine cut nails	3	1		1		30
Spike, poss. hand cut	1					
Unid. frags	6	6	6		3	12
Fasteners	2				2	3
Apparel fasteners						7
Eating utensils			1			2
.32 rimfire UMC shell						1
Misc.						3
<u>Misc. other</u>						
Wooden planks	1			1	4	
Wooden staves		1		1		
Window glass	9					300
Apparel			2			9
Rubber frags.	6				3	
Plastic			2	1		
Charcoal		6				
Animal bone		1		1		
Misc.	3			1		5

APPENDIX F

Incomplete List of Names Recorded
in Cuchillo Cemetery,
Cuchillo Assessment Study,
ACOE, 1986

Appendix F.1 Incomplete List of Names Recorded in Cuchillo Cemetery,
Cuchillo Assessment Study, ACOE, 1986

Bechtel, Laurence L.	1918-1984
Bechtel, Le Roy	1883-1969
Garcia, ?	1901-1976
Garcia, Adela M.	1903-1980
Garcia, Encarnacion M.	1910-1982
Garcia, Pedro L.	1897-1974
Garcia, Tomas M.	1907-1965
Henderson, John Michael	1948-1968
Martinez, Angelina P.	1888-1963
Montoya, Luis S.	1883-1965
Montoya, Pilar T.	1889-1970
Padilla, Maria Isabel	1886-1972
Romero, Doloritas T.	1897-1966
Sanchez, Aggie T.	1910-1984
Sanchez, Claude G.	1928-1981
Sanchez, Felix T.	1903-1971
Sanchez, Juan Guerrero	1973
Sanchez, Maria	1883-1955
Tafoya, Arismen G.	1912-1982
Tafoya, Estanislado S.	1900-1974
Tafoya, Josefita G.	1883-1963
Tafoya, Mary Jessie	1936-1973
Torres, Frederico	1867-1956
Trujillo, Jose H.	1855-1901
Trujillo, Polidoro P.	1887-1979
Trujillo, Romelia S.	1888-1966
Valencia, Rosa T.	1972-1978

END

DATE

FILMED

8-88

DTIC